

Taconic Design

ENGINEERING, PLLC.

3125 ROUTE 9W* NEW WINDSOR, NY 12553

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PRELIMINARY STORMWATER MANAGEMENT REPORT

for the

COMMERCIAL SITE PLAN FOR DR. SINGH

NYS Route 9W

SBL: 20-2-33.31

Town of New Windsor

Orange County, New York

Report prepared for:

Mahavir Singh

MRJM Realty

4 Natures Way

Cornwall, NY 12518

Report prepared by:

Charles T. Brown, PE

Taconic Design Engineering, PLLC

3125 Route 9W

New Windsor, NY 12553

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October 7, 2008

Revised: October 21, 2008

Job #: 07119 - MRJ

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I Commentary

1.0 Purpose:

The purpose of this study is to address the potential impacts, if any, which would be generated by the commercial development of a single parcel (SBL: 20-2-33.31) located in the Town of New Windsor, Orange County, New York, and to develop a stormwater management plan for the site.

2.0 Project Description:

The proposed project is a commercial development of a 10.1 acre parcel for a 16,000 sf medical office building. The building will have a parking lot designed to Town of New Windsor codes and access to NYS Route 9W.

The building will be serviced by Town water and sewer. Project plans detail all improvements as well as erosion and sedimentary control measures and are a part of this report.

3.0 Quantitative Analysis:

This study analyses the pre-development and post-development storm drainage flows using the Soil Conservation Service method as outlined in TR-55 ("Urban Hydrology for Small Watersheds", June 1986). Quantitative storm water flows are evaluated per Town of New Windsor and New York State DEC standards. The rational method is used for on-site piping design.

3.1 Drainage Areas:

General

All areas are evaluated for 2 year, 10 year, 25 year, 50 year and 100 year storms for existing and developed conditions.

Through analysis of the site topography it has been determined that there is only one discharge point from the site in existing conditions, which will not be altered by the proposed development. This drainage area is described below.

Drainage Area "A"

Drainage area "A" is the portion of the site that contains all of the proposed development and drains to the on-site intermittent stream.

Requirements for treatment and methods of treatment for the proposed drainage area are fully described in the forthcoming sections. The existing and proposed drainage area is summarized below.

<u>Drainage Area</u>	<u>Area</u>	<u>CN</u>	<u>Tc</u>
AEX	4.57	55	0.30
APR	4.57	69	0.30

3.2 Soils:

Based on the Orange County Soil Survey (Oct., 1981), it was determined that the soils within the drainage areas are as follows:

<u>Symbol</u>	<u>Description</u>	<u>Hydrologic Group</u>
UnF	Unadilla Silt Loam	8-15% slopes "B"

The runoff curve numbers (CN) have been based on "B" soils.

3.3 Land Coverage:

The type of land coverage for the areas analyzed was determined by field investigation combined with referencing the USGS topo maps, the aerial survey of this site and the soil survey. The majority of the parcel in existing conditions is wooded.

4.0 Qualitative Analysis:

The SPDES permit for this project is required under GP-08-01. For post construction water quality, the methods outlined in GP-08-01 have been used (plans and calculations are attached). In Section III of this report, the water quality volume (WQv), as set forth in the N.Y.S.D.E.C. Design Standard "Stormwater Management Design Manual (August, 2003)", has been determined and results based upon actual proposed impervious areas for the drainage area are summarized below.

<u>Drainage Area</u>	<u>On-Site Area</u>	<u>Rainfall</u>	<u>Impervious</u>	<u>WQv required</u>
APR	4.57	1.2 in	38%	0.14

Storage for 100% of the water quality volume will be provided by the proposed Pond "A" in the stormwater basin. All runoff from the site is conveyed through this proposed pond.

5.0 Stream Channel Protection Requirements (Cpv):

Stream channel protection volume requirements (Cpv) are required by the NYSDEC to protect stream channels from erosion. To accomplish this, standards require 24 hour extended detention of the one year 24 hr storm event with storage volumes being determined by methods set forth in Chapter 6 of TR-55. The one year 24 hr storm event for this area of Orange County is 3.0 in of rain. Channel protection requirements for the proposed drainage area have been met as follows with supporting calculations provided in Section IV of this report.

The required volume has been provided in the proposed Pond "A" per above.

The peak runoff rates and channel protection requirements for all drainage areas are summarized below:

<u>Storm</u>	<u>Runoff (CFS)</u>	<u>Increase (CFS)</u>	<u>CPv Req'd</u>
1yr CPv	AEX 0.7		
3.0 in	APR 2.4	1.7	0.11

6.0 Analysis:

All areas are analyzed for 2yr, 10yr, 25yr, 50yr and 100yr storms for existing and developed conditions. Section VI of this report includes calculations for the stage storage discharge of the outlet pipes of the outlet control structure.

Storm Rainfall	2 year 3.75 in	10 year 5.0 in	25 year 6.5 in	50 year 7.0 in	100 year 7.8 in
AEX	1.5	3.5	6.4	7.5	8.7
APR	3.9	7.0	11.1	12.5	14.0
ARA	0.5	4.4	9.2	10.8	13.3
ARB	0.5	2.6	5.0	5.6	6.5
% Reduction	67%	26%	22%	25%	31%

The typical abbreviations are as follows:

AEX: Drainage Area "A" existing

APR: Drainage Area "A" proposed

ARA: APR Routed through Pond "A"

ARB: ARA Routed through Pond "B"

The on site stormwater management basins will mitigate the increased flows for all design storms.

7.0 Stormwater Management Practices (SMPs):

SMPs for the project have been selected and designed based upon proposed land use as well as regulations and methods set forth by the NYSDEC in the "Stormwater Management Design Manual-August 2003".

In proposed conditions, stormwater runoff from the site is collected by a network of catch basins. This flow is piped to the proposed "Pond A" for water quality, then "Pond B" for quantity.

The proposed Pond "A" will provide water quality (WQv).

8.0 Construction Sequence:

The construction described will be performed in conformance with the following steps.

- a) Install temporary sediment control devices and stabilized construction entrances.
- b) Stakeout buildings, parking lots, utilities, ponds and drainage facilities.
- c) Clear building and parking areas and stock pile soil.
- d) Build wet ponds
- e) Perform rough site grading
- f) Install infiltration system, drainage system and corresponding erosion control.
- g) Construct buildings
- h) Fine grade site, place parking lot subbase and seed unpaved areas.
- i) Complete construction.

- j) Clean wet pond, infiltration system, and drainage network
- k) Remove temporary erosion control devices.

Roll off dumpsters and trash receptacles are to remain on site for the duration of the project for the proper collection and disposal of all construction debris and additional litter produced by workers. These collection devices are to be emptied regularly.

9.0 Conclusion:

Based on the analysis and results set forth in this study and the associated reference material, it is the professional conclusion of the undersigned that the proposed commercial development, "Commercial Site Plan for Dr. Singh", will cause no adverse impacts on the existing water facilities.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law."

Respectfully submitted,

Charles T. Brown, PE
Taconic Design Engineering
President
NYS Lic. # 065996

II: HYDRAULIC CALCULATIONS FOR QUALITY

**TACONIC DESIGN
CONSULTANTS**

SITE PLANNING/SUB DIVISIONS

RESIDENTIAL/COMMERCIAL DESIGN/SURVEYING

PERMIT PREPARATION/HEALTH DEPT. APPROVAL
STRUCTURAL ENGINEERING/SEPTIC DESIGN/CADD SERVICES

JOB SINGH SITE PLAN # 07119-MRJ

SHEET NO. _____ OF _____

CALCULATED BY CBB DATE _____

CHECKED BY _____ DATE _____

SCALE _____

WATER QUALITY CALCULATIONS

REF 3 NY 5-2K '03 STORMWATER DESIGN MANUAL (8/02)

$$SITE AREA (A) = 4.57 \text{ ac}$$

$$INfiltration Area = 1.29 \text{ ac}$$

$$I = \frac{1.29}{4.57} \times 100\% = 28\%$$

$$R_v = 0.05 + 0.0017 = 0.30$$

$$P = 90\% \text{ RAINFALL EVENT} = 1.2$$

WQ_W = WATER QUALITY VOLUME

$$= \frac{(P)(R_v)(A)}{12}$$

$$= \frac{(1.2)(0.30)(4.57)}{12}$$

$$\underline{\underline{WQ_W = 0.14 \text{ acft}}}$$

**III: HYDRAULIC CALCULATIONS
for
CHANNEL PROTECTION**

Taconic Design

CONSULTANTS

SITE PLANNING/SUB DIVISIONS

RESIDENTIAL/COMMERCIAL DESIGN/SURVEYING

PERMIT PREPARATION/HEALTH DEPT. APPROVAL

STRUCTURAL ENGINEERING/SEPTIC DESIGN/CADD SERVICES

JOB SINGL SITE PLAN

SHEET NO. _____ OF _____

CALCULATED BY CBS PE DATE 10/20/03

CHECKED BY _____ DATE _____

SCALE _____

CHANNEL PROTECTION CALCULATIONS

REF: TR-55 (6/86)

$$V_d = 53.33 \text{ Q.A.m}$$

$$V_d = 53.33 \times 0.67'' \times 4.6 \text{ ac} \times \frac{1 \text{ ft}^2}{546.10} = 0.257 \text{ ac ft}$$

$$\frac{Q_1}{Q_2} = \frac{0.7}{2.4} = 0.292$$

$$\text{From FIG 5-1} \quad \frac{V_s}{V_d} = 0.385$$

$$V_s = 0.385 \times 0.257 = \underline{\underline{0.11 \text{ ac ft}}} \quad (\text{cov})$$

Input requirements and procedures

Use figure 6-1 to estimate storage volume (V_s) required or peak outflow discharge (q_o). The most frequent application is to estimate V_s , for which the required inputs are runoff volume (V_r), q_o , and peak inflow discharge (q_i). To estimate q_o , the required inputs are V_r , V_s , and q_i .

Estimating V_s

Use worksheet 6a to estimate V_s , storage volume required, by the following procedure.

1. Determine q_o . Many factors may dictate the selection of peak outflow discharge. The most common is to limit downstream discharges to a desired level, such as predevelopment discharge. Another factor may be that the outflow device has already been selected.
2. Estimate q_i by procedures in chapters 4 or 5. Do not use peak discharges developed by any other procedure. When using the Tabular Hydrograph method to estimate q_i for a subarea, only use

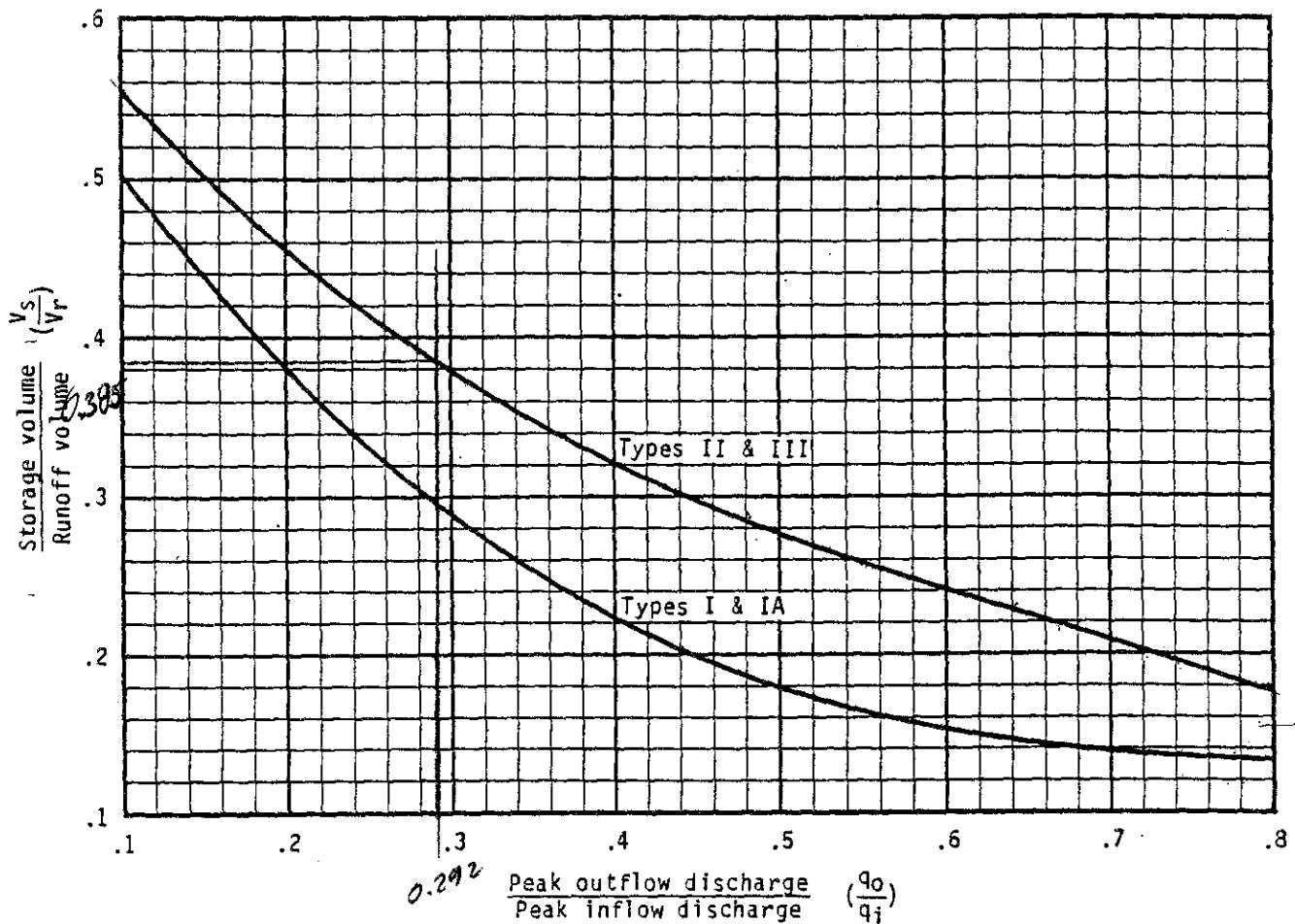


Figure 6-1.—Approximate detention basin routing for rainfall types I, IA, II, and III.

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-20-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

Hydrograph Name: AEX1

Storm Data				Drainage Area Data			
Frequency :	1 Yrs.	Area:	4.6 Ac.	T.C.:	0.30 Hrs.		
Rainfall :	3.00 In.	CN :	55	Ia/P:	0.10		
Runoff :	0.19 In.	***** Hydrograph Status: Valid *****					
Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.0	13.60	0.1	16.20	0.0	18.80	0.0
11.10	0.0	13.70	0.1	16.30	0.0	18.90	0.0
11.20	0.0	13.80	0.1	16.40	0.0	19.00	0.0
11.30	0.0	13.90	0.1	16.50	0.0	19.10	0.0
11.40	0.0	14.00	0.1	16.60	0.0	19.20	0.0
11.50	0.1	14.10	0.1	16.70	0.0	19.30	0.0
11.60	0.1	14.20	0.1	16.80	0.0	19.40	0.0
11.70	0.1	14.30	0.1	16.90	0.0	19.50	0.0
11.80	0.1	14.40	0.1	17.00	0.0	19.60	0.0
11.90	0.1	14.50	0.1	17.10	0.0	19.70	0.0
12.00	0.2	14.60	0.1	17.20	0.0	19.80	0.0
12.10	0.2	14.70	0.1	17.30	0.0	19.90	0.0
12.20	0.4	14.80	0.1	17.40	0.0	20.00	0.0
12.30	0.6	14.90	0.1	17.50	0.0	20.10	0.0
12.40	0.7	15.00	0.1	17.60	0.0	20.20	0.0
12.50	0.6	15.10	0.1	17.70	0.0	20.30	0.0
12.60	0.5	15.20	0.1	17.80	0.0	20.40	0.0
12.70	0.4	15.30	0.0	17.90	0.0	20.50	0.0
12.80	0.3	15.40	0.0	18.00	0.0	20.60	0.0
12.90	0.2	15.50	0.0	18.10	0.0	20.70	0.0
13.00	0.2	15.60	0.0	18.20	0.0	20.80	0.0
13.10	0.1	15.70	0.0	18.30	0.0	20.90	0.0
13.20	0.1	15.80	0.0	18.40	0.0	21.00	0.0
13.30	0.1	15.90	0.0	18.50	0.0		
13.40	0.1	16.00	0.0	18.60	0.0		
13.50	0.1	16.10	0.0	18.70	0.0		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-20-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

=====

Hydrograph Name: APR1

Storm Data

Drainage Area Data

Frequency : 1 Yrs.

Area: 4.6 Ac. T.C.: 0.30 Hrs.

Rainfall : 3.00 In.

CN : 69 Ia/P: 0.10

Runoff : 0.67 In.

***** Hydrograph Status: Valid *****

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.1	13.60	0.3	16.20	0.1	18.80	0.1
11.10	0.1	13.70	0.3	16.30	0.1	18.90	0.1
11.20	0.1	13.80	0.3	16.40	0.1	19.00	0.1
11.30	0.1	13.90	0.3	16.50	0.1	19.10	0.1
11.40	0.2	14.00	0.3	16.60	0.1	19.20	0.1
11.50	0.2	14.10	0.2	16.70	0.1	19.30	0.1
11.60	0.2	14.20	0.2	16.80	0.1	19.40	0.1
11.70	0.3	14.30	0.2	16.90	0.1	19.50	0.1
11.80	0.3	14.40	0.2	17.00	0.1	19.60	0.1
11.90	0.4	14.50	0.2	17.10	0.1	19.70	0.1
12.00	0.6	14.60	0.2	17.20	0.1	19.80	0.1
12.10	0.9	14.70	0.2	17.30	0.1	19.90	0.1
12.20	1.4	14.80	0.2	17.40	0.1	20.00	0.1
12.30	2.1	14.90	0.2	17.50	0.1	20.10	0.1
12.40	2.4	15.00	0.2	17.60	0.1	20.20	0.1
12.50	2.2	15.10	0.2	17.70	0.1	20.30	0.1
12.60	1.7	15.20	0.2	17.80	0.1	20.40	0.1
12.70	1.3	15.30	0.2	17.90	0.1	20.50	0.1
12.80	1.0	15.40	0.2	18.00	0.1	20.60	0.1
12.90	0.8	15.50	0.2	18.10	0.1	20.70	0.1
13.00	0.6	15.60	0.2	18.20	0.1	20.80	0.1
13.10	0.5	15.70	0.2	18.30	0.1	20.90	0.1
13.20	0.4	15.80	0.1	18.40	0.1	21.00	0.1
13.30	0.4	15.90	0.1	18.50	0.1		
13.40	0.3	16.00	0.1	18.60	0.1		
13.50	0.3	16.10	0.1	18.70	0.1		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

WORKING CURVE
FOR POND NO.PONDA18

DT= 0.10 HRS

STORAGE

ELEV (FT)	DISC. (CFS)	S2 (AC FT)	S2 (CFS-HRS)	O2/2 (CFS)	S2/DT (CFS)	S2/DT+O2/2 (CFS)
48.00	0.0	0.00	0.0	0.0	0.0	0.0
49.00	0.0	0.07	0.8	0.0	8.0	8.0
50.00	0.0	0.16	1.9	0.0	19.0	19.0
51.00	0.0	0.25	3.0	0.0	30.0	30.0
52.00	15.5	0.37	4.5	7.8	45.0	52.8

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 2 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

POND ROUTING

HYDROGRAPH #APR1
POND #PONDA18
STORM FREQUENCY: 1 YRS.

TIME (HRS)	INFLOW (CFS)	INFLOW (CFS)	AVG S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
11.00	0.1	0.1	0.1	0.0	48.01	0.00
11.10	0.1	0.1	0.2	0.0	48.03	0.00
11.20	0.1	0.1	0.3	0.0	48.04	0.00
11.30	0.1	0.1	0.4	0.0	48.05	0.00
11.40	0.2	0.2	0.6	0.0	48.08	0.00
11.50	0.2	0.2	0.8	0.0	48.10	0.01
11.60	0.2	0.2	1.0	0.0	48.13	0.01
11.70	0.3	0.3	1.3	0.0	48.16	0.01
11.80	0.3	0.3	1.6	0.0	48.20	0.01
11.90	0.4	0.4	2.0	0.0	48.25	0.02
12.00	0.6	0.5	2.5	0.0	48.31	0.02
12.10	0.9	0.8	3.3	0.0	48.41	0.03
12.20	1.4	1.2	4.5	0.0	48.56	0.04
12.30	2.1	1.8	6.3	0.0	48.79	0.05
12.40	2.4	2.3	8.6	0.0	49.05	0.07
12.50	2.2	2.3	10.9	0.0	49.26	0.09
12.60	1.7	2.0	12.9	0.0	49.45	0.11
12.70	1.3	1.5	14.4	0.0	49.58	0.12
12.80	1.0	1.2	15.6	0.0	49.69	0.13
12.90	0.8	0.9	16.5	0.0	49.77	0.14
13.00	0.6	0.7	17.2	0.0	49.84	0.14
13.10	0.5	0.6	17.8	0.0	49.89	0.15
13.20	0.4	0.5	18.3	0.0	49.94	0.15
13.30	0.4	0.4	18.7	0.0	49.97	0.15
13.40	0.3	0.4	19.1	0.0	50.01	0.16
13.50	0.3	0.3	19.4	0.0	50.04	0.16
13.60	0.3	0.3	19.7	0.0	50.06	0.16
13.70	0.3	0.3	20.0	0.0	50.09	0.17
13.80	0.3	0.3	20.3	0.0	50.12	0.17
13.90	0.3	0.3	20.6	0.0	50.15	0.17
14.00	0.3	0.3	20.9	0.0	50.17	0.17
14.10	0.2	0.3	21.2	0.0	50.20	0.18
14.20	0.2	0.2	21.4	0.0	50.22	0.18
14.30	0.2	0.2	21.6	0.0	50.24	0.18
14.40	0.2	0.2	21.8	0.0	50.25	0.18

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 3 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHODCOMPUTED BY: CTB
CHECKED BY : CTB

POND ROUTING

HYDROGRAPH #APR1
POND #PONDA18
STORM FREQUENCY: 1 YRS.

TIME (HRS)	INFLOW (CFS)	INFLOW (CFS)	AVG S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
14.60	0.2	0.2	22.2	0.0	50.29	0.18
14.70	0.2	0.2	22.4	0.0	50.31	0.19
14.80	0.2	0.2	22.6	0.0	50.33	0.19
14.90	0.2	0.2	22.8	0.0	50.35	0.19
15.00	0.2	0.2	23.0	0.0	50.36	0.19
15.10	0.2	0.2	23.2	0.0	50.38	0.19
15.20	0.2	0.2	23.4	0.0	50.40	0.19
15.30	0.2	0.2	23.6	0.0	50.42	0.20
15.40	0.2	0.2	23.8	0.0	50.44	0.20
15.50	0.2	0.2	24.0	0.0	50.45	0.20
15.60	0.2	0.2	24.2	0.0	50.47	0.20
15.70	0.2	0.2	24.4	0.0	50.49	0.20
15.80	0.1	0.2	24.6	0.0	50.51	0.20
15.90	0.1	0.1	24.7	0.0	50.52	0.20
16.00	0.1	0.1	24.8	0.0	50.53	0.20
16.10	0.1	0.1	24.9	0.0	50.54	0.21
16.20	0.1	0.1	25.0	0.0	50.55	0.21
16.30	0.1	0.1	25.1	0.0	50.55	0.21
16.40	0.1	0.1	25.2	0.0	50.56	0.21
16.50	0.1	0.1	25.3	0.0	50.57	0.21
16.60	0.1	0.1	25.4	0.0	50.58	0.21
16.70	0.1	0.1	25.5	0.0	50.59	0.21
16.80	0.1	0.1	25.6	0.0	50.60	0.21
16.90	0.1	0.1	25.7	0.0	50.61	0.21
17.00	0.1	0.1	25.8	0.0	50.62	0.21
17.10	0.1	0.1	25.9	0.0	50.63	0.21
17.20	0.1	0.1	26.0	0.0	50.64	0.21
17.30	0.1	0.1	26.1	0.0	50.65	0.22
17.40	0.1	0.1	26.2	0.0	50.65	0.22
17.50	0.1	0.1	26.3	0.0	50.66	0.22
17.60	0.1	0.1	26.4	0.0	50.67	0.22
17.70	0.1	0.1	26.5	0.0	50.68	0.22
17.80	0.1	0.1	26.6	0.0	50.69	0.22
17.90	0.1	0.1	26.7	0.0	50.70	0.22
18.00	0.1	0.1	26.8	0.0	50.71	0.22

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 4 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTINGHYDROGRAPH #APR1
POND #PONDA18
STORM FREQUENCY: 1 YRS.

TIME (HRS)	INFLOW (CFS)	INFLOW (CFS)	AVG S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
18.20	0.1	0.1	27.0	0.0	50.73	0.22
18.30	0.1	0.1	27.1	0.0	50.74	0.22
18.40	0.1	0.1	27.2	0.0	50.75	0.22
18.50	0.1	0.1	27.3	0.0	50.75	0.23
18.60	0.1	0.1	27.4	0.0	50.76	0.23
18.70	0.1	0.1	27.5	0.0	50.77	0.23
18.80	0.1	0.1	27.6	0.0	50.78	0.23
18.90	0.1	0.1	27.7	0.0	50.79	0.23
19.00	0.1	0.1	27.8	0.0	50.80	0.23
19.10	0.1	0.1	27.9	0.0	50.81	0.23
19.20	0.1	0.1	28.0	0.0	50.82	0.23
19.30	0.1	0.1	28.1	0.0	50.83	0.23
19.40	0.1	0.1	28.2	0.0	50.84	0.23
19.50	0.1	0.1	28.3	0.0	50.85	0.23
19.60	0.1	0.1	28.4	0.0	50.85	0.23
19.70	0.1	0.1	28.5	0.0	50.86	0.24
19.80	0.1	0.1	28.6	0.0	50.87	0.24
19.90	0.1	0.1	28.7	0.0	50.88	0.24
20.00	0.1	0.1	28.8	0.0	50.89	0.24
20.10	0.1	0.1	28.9	0.0	50.90	0.24
20.20	0.1	0.1	29.0	0.0	50.91	0.24
20.30	0.1	0.1	29.1	0.0	50.92	0.24
20.40	0.1	0.1	29.2	0.0	50.93	0.24
20.50	0.1	0.1	29.3	0.0	50.94	0.24
20.60	0.1	0.1	29.4	0.0	50.95	0.24
20.70	0.1	0.1	29.5	0.0	50.95	0.24
20.80	0.1	0.1	29.6	0.0	50.96	0.24
20.90	0.1	0.1	29.7	0.0	50.97	0.25
21.00	0.1	0.1	29.8	0.0	50.98	0.25

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 5 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

HYDROGRAPH #APR1

POND #PONDA18

STORM FREQUENCY: 1 YRS.

SUMMARY OF POND ROUTING RESULTS

PEAK INFLOW : 2.4 CFS @ T = 12.40 HRS.

PEAK DISCHARGE : 0.0 CFS @ T = 0.00 HRS.

PEAK STORAGE VOLUME : 0.25 AC.FT.

PEAK STORAGE ELEVATION : 50.98

FREEBOARD : 1.02 FT.

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 6 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

Hydrograph Name: AR1A

Storm Data

Drainage Area Data

Frequency :	1 Yrs.	Area:	4.6 Ac.	T.C.:	0.00 Hrs.
Rainfall :	3.00 In.	CN :	0	Ia/P:	0.00
Runoff :	0.00 In.	***** Hydrograph Status: Valid *****			

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.0	13.60	0.0	16.20	0.0	18.80	0.0
11.10	0.0	13.70	0.0	16.30	0.0	18.90	0.0
11.20	0.0	13.80	0.0	16.40	0.0	19.00	0.0
11.30	0.0	13.90	0.0	16.50	0.0	19.10	0.0
11.40	0.0	14.00	0.0	16.60	0.0	19.20	0.0
11.50	0.0	14.10	0.0	16.70	0.0	19.30	0.0
11.60	0.0	14.20	0.0	16.80	0.0	19.40	0.0
11.70	0.0	14.30	0.0	16.90	0.0	19.50	0.0
11.80	0.0	14.40	0.0	17.00	0.0	19.60	0.0
11.90	0.0	14.50	0.0	17.10	0.0	19.70	0.0
12.00	0.0	14.60	0.0	17.20	0.0	19.80	0.0
12.10	0.0	14.70	0.0	17.30	0.0	19.90	0.0
12.20	0.0	14.80	0.0	17.40	0.0	20.00	0.0
12.30	0.0	14.90	0.0	17.50	0.0	20.10	0.0
12.40	0.0	15.00	0.0	17.60	0.0	20.20	0.0
12.50	0.0	15.10	0.0	17.70	0.0	20.30	0.0
12.60	0.0	15.20	0.0	17.80	0.0	20.40	0.0
12.70	0.0	15.30	0.0	17.90	0.0	20.50	0.0
12.80	0.0	15.40	0.0	18.00	0.0	20.60	0.0
12.90	0.0	15.50	0.0	18.10	0.0	20.70	0.0
13.00	0.0	15.60	0.0	18.20	0.0	20.80	0.0
13.10	0.0	15.70	0.0	18.30	0.0	20.90	0.0
13.20	0.0	15.80	0.0	18.40	0.0	21.00	0.0
13.30	0.0	15.90	0.0	18.50	0.0		
13.40	0.0	16.00	0.0	18.60	0.0		
13.50	0.0	16.10	0.0	18.70	0.0		

IV: HYDRAULIC CALCULATIONS FOR QUANTITY

Worksheet 2: Runoff curve number and runoff

Project SINGH SITE PLAN By C.C. Date 10/6/83
Location RT 9W, NEW WINDSOR Checked _____ Date _____
Circle one: Present Developed Area "A"

1. Runoff curve number (CN)

$$CN \text{ (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{315.46}{4.57} = 69.03; \text{ Use CN} = \boxed{69}$$

2. Runoff

Frequency yr

Rainfall, P (24-hour) in

Runoff, Q in
(Use P and CN with table 2-1, fig. 2-1,
or eqs. 2-3 and 2-4.)

Storm #1	Storm #2	Storm #3

Worksheet 2: Runoff curve number and runoff

Project SINKH SITE PLAN By GTO Date 10/6/08

Location RT 9W, NEW WILMINGTON Checked _____ Date _____

Circle one: Present Developed AREA "A"

1. Runoff curve number (CN)

1/ Use only one CN source per line.

Totals =

$$CN \text{ (weighted)} = \frac{\text{total product}}{\text{total area}} = \underline{\hspace{2cm}} * \underline{\hspace{2cm}}. \quad \text{Use CN} = \boxed{55}$$

2. Runoff

Frequency YF

Rainfall, P (24-hour) in

Runoff, Q in
(Use P and CN with table 2-1, fig. 2-1,
or eqs. 2-3 and 2-4.)

Storm #1	Storm #2	Storm #3

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-20-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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Hydrograph Name: AEX2

Storm Data

Drainage Area Data

Frequency : 2 Yrs.
 Rainfall : 3.75 In.
 Runoff : 0.43 In.

Area: 4.6 Ac. T.C.: 0.30 Hrs.
 CN : 55 Ia/P: 0.10
 **** Hydrograph Status: Valid ****

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.1	13.60	0.2	16.20	0.1	18.80	0.0
11.10	0.1	13.70	0.2	16.30	0.1	18.90	0.0
11.20	0.1	13.80	0.2	16.40	0.1	19.00	0.0
11.30	0.1	13.90	0.2	16.50	0.1	19.10	0.0
11.40	0.1	14.00	0.2	16.60	0.1	19.20	0.0
11.50	0.1	14.10	0.2	16.70	0.1	19.30	0.0
11.60	0.1	14.20	0.2	16.80	0.1	19.40	0.0
11.70	0.2	14.30	0.1	16.90	0.1	19.50	0.0
11.80	0.2	14.40	0.1	17.00	0.1	19.60	0.0
11.90	0.3	14.50	0.1	17.10	0.1	19.70	0.0
12.00	0.4	14.60	0.1	17.20	0.1	19.80	0.0
12.10	0.6	14.70	0.1	17.30	0.1	19.90	0.0
12.20	0.9	14.80	0.1	17.40	0.1	20.00	0.0
12.30	1.4	14.90	0.1	17.50	0.1	20.10	0.0
12.40	1.5	15.00	0.1	17.60	0.1	20.20	0.0
12.50	1.4	15.10	0.1	17.70	0.1	20.30	0.0
12.60	1.1	15.20	0.1	17.80	0.1	20.40	0.0
12.70	0.8	15.30	0.1	17.90	0.1	20.50	0.0
12.80	0.6	15.40	0.1	18.00	0.1	20.60	0.0
12.90	0.5	15.50	0.1	18.10	0.1	20.70	0.0
13.00	0.4	15.60	0.1	18.20	0.0	20.80	0.0
13.10	0.3	15.70	0.1	18.30	0.0	20.90	0.0
13.20	0.3	15.80	0.1	18.40	0.0	21.00	0.0
13.30	0.2	15.90	0.1	18.50	0.0		
13.40	0.2	16.00	0.1	18.60	0.0		
13.50	0.2	16.10	0.1	18.70	0.0		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-20-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

Hydrograph Name: APR2

Storm Data

Drainage Area Data

Frequency :	2 Yrs.	Area:	4.6 Ac.	T.C.:	0.30 Hrs.
Rainfall :	3.75 In.	CN :	69	Ia/P:	0.10
Runoff :	1.11 In.	**** Hydrograph Status: Valid ****			

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.2	13.60	0.5	16.20	0.2	18.80	0.1
11.10	0.2	13.70	0.5	16.30	0.2	18.90	0.1
11.20	0.2	13.80	0.5	16.40	0.2	19.00	0.1
11.30	0.2	13.90	0.4	16.50	0.2	19.10	0.1
11.40	0.3	14.00	0.4	16.60	0.2	19.20	0.1
11.50	0.3	14.10	0.4	16.70	0.2	19.30	0.1
11.60	0.3	14.20	0.4	16.80	0.2	19.40	0.1
11.70	0.5	14.30	0.4	16.90	0.2	19.50	0.1
11.80	0.6	14.40	0.4	17.00	0.2	19.60	0.1
11.90	0.7	14.50	0.4	17.10	0.2	19.70	0.1
12.00	1.0	14.60	0.3	17.20	0.2	19.80	0.1
12.10	1.4	14.70	0.3	17.30	0.2	19.90	0.1
12.20	2.3	14.80	0.3	17.40	0.2	20.00	0.1
12.30	3.5	14.90	0.3	17.50	0.2	20.10	0.1
12.40	<u>3.9</u>	15.00	0.3	17.60	0.2	20.20	0.1
12.50	3.6	15.10	0.3	17.70	0.2	20.30	0.1
12.60	2.8	15.20	0.3	17.80	0.1	20.40	0.1
12.70	2.2	15.30	0.3	17.90	0.1	20.50	0.1
12.80	1.6	15.40	0.3	18.00	0.1	20.60	0.1
12.90	1.3	15.50	0.3	18.10	0.1	20.70	0.1
13.00	0.9	15.60	0.3	18.20	0.1	20.80	0.1
13.10	0.8	15.70	0.3	18.30	0.1	20.90	0.1
13.20	0.7	15.80	0.2	18.40	0.1	21.00	0.1
13.30	0.6	15.90	0.2	18.50	0.1		
13.40	0.6	16.00	0.2	18.60	0.1		
13.50	0.5	16.10	0.2	18.70	0.1		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

WORKING CURVE
FOR POND NO.PONDA18

DT= 0.10 HRS

ELEV (FT)	DISC. (CFS)	STORAGE		O2/2 (CFS)	S2/DT (CFS)	S2/DT+O2/2 (CFS)
		S2 (AC FT)	S2 (CFS-HRS)			
48.00	0.0	0.00	0.0	0.0	0.0	0.0
49.00	0.0	0.07	0.8	0.0	8.0	8.0
50.00	0.0	0.16	1.9	0.0	19.0	19.0
51.00	0.0	0.25	3.0	0.0	30.0	30.0
52.00	15.5	0.37	4.5	7.8	45.0	52.8

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TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 2 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTING

HYDROGRAPH #APR2
 POND #PONDA18
 STORM FREQUENCY: 2 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
11.00	0.2	0.1	0.1	0.0	48.01	0.00
11.10	0.2	0.2	0.3	0.0	48.04	0.00
11.20	0.2	0.2	0.5	0.0	48.06	0.00
11.30	0.2	0.2	0.7	0.0	48.09	0.01
11.40	0.3	0.3	1.0	0.0	48.13	0.01
11.50	0.3	0.3	1.3	0.0	48.16	0.01
11.60	0.3	0.3	1.6	0.0	48.20	0.01
11.70	0.5	0.4	2.0	0.0	48.25	0.02
11.80	0.6	0.6	2.6	0.0	48.33	0.02
11.90	0.7	0.7	3.3	0.0	48.41	0.03
12.00	1.0	0.9	4.2	0.0	48.53	0.03
12.10	1.4	1.2	5.4	0.0	48.68	0.04
12.20	2.3	1.9	7.3	0.0	48.91	0.06
12.30	3.5	2.9	10.2	0.0	49.20	0.08
12.40	3.9	3.7	13.9	0.0	49.54	0.11
12.50	3.6	3.8	17.7	0.0	49.88	0.15
12.60	2.8	3.2	20.9	0.0	50.17	0.17
12.70	2.2	2.5	23.4	0.0	50.40	0.19
12.80	1.6	1.9	25.3	0.0	50.57	0.21
12.90	1.3	1.5	26.8	0.0	50.71	0.22
13.00	0.9	1.1	27.9	0.0	50.81	0.23
13.10	0.8	0.9	28.8	0.0	50.89	0.24
13.20	0.7	0.8	29.6	0.0	50.96	0.24
13.30	0.6	0.7	30.3	0.2	51.01	0.25
13.40	0.6	0.6	30.7	0.5	51.03	0.25
13.50	0.5	0.6	30.8	0.5	51.04	0.25
13.60	0.5	0.5	30.8	0.5	51.04	0.25
13.70	0.5	0.5	30.8	0.5	51.04	0.25
13.80	0.5	0.5	30.8	0.5	51.04	0.25
13.90	0.4	0.5	30.8	0.5	51.04	0.25
14.00	0.4	0.4	30.7	0.5	51.03	0.25
14.10	0.4	0.4	30.6	0.4	51.03	0.25
14.20	0.4	0.4	30.6	0.4	51.03	0.25
14.30	0.4	0.4	30.6	0.4	51.03	0.25
14.40	0.4	0.4	30.6	0.4	51.03	0.25

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 3 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

POND ROUTING

HYDROGRAPH #APR2
POND #PONDA18
STORM FREQUENCY: 2 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
14.60	0.3	0.4	30.6	0.4	51.03	0.25
14.70	0.3	0.3	30.5	0.3	51.02	0.25
14.80	0.3	0.3	30.5	0.3	51.02	0.25
14.90	0.3	0.3	30.5	0.3	51.02	0.25
15.00	0.3	0.3	30.5	0.3	51.02	0.25
15.10	0.3	0.3	30.5	0.3	51.02	0.25
15.20	0.3	0.3	30.5	0.3	51.02	0.25
15.30	0.3	0.3	30.5	0.3	51.02	0.25
15.40	0.3	0.3	30.5	0.3	51.02	0.25
15.50	0.3	0.3	30.5	0.3	51.02	0.25
15.60	0.3	0.3	30.5	0.3	51.02	0.25
15.70	0.3	0.3	30.5	0.3	51.02	0.25
15.80	0.2	0.3	30.5	0.3	51.02	0.25
15.90	0.2	0.2	30.4	0.3	51.02	0.25
16.00	0.2	0.2	30.3	0.2	51.01	0.25
16.10	0.2	0.2	30.3	0.2	51.01	0.25
16.20	0.2	0.2	30.3	0.2	51.01	0.25
16.30	0.2	0.2	30.3	0.2	51.01	0.25
16.40	0.2	0.2	30.3	0.2	51.01	0.25
16.50	0.2	0.2	30.3	0.2	51.01	0.25
16.60	0.2	0.2	30.3	0.2	51.01	0.25
16.70	0.2	0.2	30.3	0.2	51.01	0.25
16.80	0.2	0.2	30.3	0.2	51.01	0.25
16.90	0.2	0.2	30.3	0.2	51.01	0.25
17.00	0.2	0.2	30.3	0.2	51.01	0.25
17.10	0.2	0.2	30.3	0.2	51.01	0.25
17.20	0.2	0.2	30.3	0.2	51.01	0.25
17.30	0.2	0.2	30.3	0.2	51.01	0.25
17.40	0.2	0.2	30.3	0.2	51.01	0.25
17.50	0.2	0.2	30.3	0.2	51.01	0.25
17.60	0.2	0.2	30.3	0.2	51.01	0.25
17.70	0.2	0.2	30.3	0.2	51.01	0.25
17.80	0.1	0.2	30.3	0.2	51.01	0.25
17.90	0.1	0.1	30.2	0.1	51.01	0.25
18.00	0.1	0.1	30.2	0.1	51.01	0.25

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 4 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

POND ROUTING

HYDROGRAPH #APR2
POND #PONDA18
STORM FREQUENCY: 2 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
18.20	0.1	0.1	30.2	0.1	51.01	0.25
18.30	0.1	0.1	30.2	0.1	51.01	0.25
18.40	0.1	0.1	30.2	0.1	51.01	0.25
18.50	0.1	0.1	30.2	0.1	51.01	0.25
18.60	0.1	0.1	30.2	0.1	51.01	0.25
18.70	0.1	0.1	30.2	0.1	51.01	0.25
18.80	0.1	0.1	30.2	0.1	51.01	0.25
18.90	0.1	0.1	30.2	0.1	51.01	0.25
19.00	0.1	0.1	30.2	0.1	51.01	0.25
19.10	0.1	0.1	30.2	0.1	51.01	0.25
19.20	0.1	0.1	30.2	0.1	51.01	0.25
19.30	0.1	0.1	30.2	0.1	51.01	0.25
19.40	0.1	0.1	30.2	0.1	51.01	0.25
19.50	0.1	0.1	30.2	0.1	51.01	0.25
19.60	0.1	0.1	30.2	0.1	51.01	0.25
19.70	0.1	0.1	30.2	0.1	51.01	0.25
19.80	0.1	0.1	30.2	0.1	51.01	0.25
19.90	0.1	0.1	30.2	0.1	51.01	0.25
20.00	0.1	0.1	30.2	0.1	51.01	0.25
20.10	0.1	0.1	30.2	0.1	51.01	0.25
20.20	0.1	0.1	30.2	0.1	51.01	0.25
20.30	0.1	0.1	30.2	0.1	51.01	0.25
20.40	0.1	0.1	30.2	0.1	51.01	0.25
20.50	0.1	0.1	30.2	0.1	51.01	0.25
20.60	0.1	0.1	30.2	0.1	51.01	0.25
20.70	0.1	0.1	30.2	0.1	51.01	0.25
20.80	0.1	0.1	30.2	0.1	51.01	0.25
20.90	0.1	0.1	30.2	0.1	51.01	0.25
21.00	0.1	0.1	30.2	0.1	51.01	0.25

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 5 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

HYDROGRAPH #APR2
POND #PONDA18
STORM FREQUENCY: 2 YRS.

SUMMARY OF POND ROUTING RESULTS

PEAK INFLOW : 3.9 CFS @ T = 12.40 HRS.

PEAK DISCHARGE : 0.5 CFS @ T = 13.40 HRS.

PEAK STORAGE VOLUME : 0.25 AC.FT.

PEAK STORAGE ELEVATION : 51.04

FREEBOARD : 0.96 FT.

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 6 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

Hydrograph Name: AR2A

Storm Data

Frequency : 2 Yrs.
Rainfall : 3.75 In.
Runoff : 0.00 In.

Drainage Area Data

Area: 4.6 Ac. T.C.: 0.00 Hrs.
CN : 0 Ia/P: 0.00
***** Hydrograph Status: Valid *****

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.0	13.60	0.5	16.20	0.2	18.80	0.1
11.10	0.0	13.70	0.5	16.30	0.2	18.90	0.1
11.20	0.0	13.80	0.5	16.40	0.2	19.00	0.1
11.30	0.0	13.90	0.5	16.50	0.2	19.10	0.1
11.40	0.0	14.00	0.5	16.60	0.2	19.20	0.1
11.50	0.0	14.10	0.4	16.70	0.2	19.30	0.1
11.60	0.0	14.20	0.4	16.80	0.2	19.40	0.1
11.70	0.0	14.30	0.4	16.90	0.2	19.50	0.1
11.80	0.0	14.40	0.4	17.00	0.2	19.60	0.1
11.90	0.0	14.50	0.4	17.10	0.2	19.70	0.1
12.00	0.0	14.60	0.4	17.20	0.2	19.80	0.1
12.10	0.0	14.70	0.3	17.30	0.2	19.90	0.1
12.20	0.0	14.80	0.3	17.40	0.2	20.00	0.1
12.30	0.0	14.90	0.3	17.50	0.2	20.10	0.1
12.40	0.0	15.00	0.3	17.60	0.2	20.20	0.1
12.50	0.0	15.10	0.3	17.70	0.2	20.30	0.1
12.60	0.0	15.20	0.3	17.80	0.2	20.40	0.1
12.70	0.0	15.30	0.3	17.90	0.1	20.50	0.1
12.80	0.0	15.40	0.3	18.00	0.1	20.60	0.1
12.90	0.0	15.50	0.3	18.10	0.1	20.70	0.1
13.00	0.0	15.60	0.3	18.20	0.1	20.80	0.1
13.10	0.0	15.70	0.3	18.30	0.1	20.90	0.1
13.20	0.0	15.80	0.3	18.40	0.1	21.00	0.1
13.30	0.2	15.90	0.3	18.50	0.1		
13.40	0.5	16.00	0.2	18.60	0.1		
13.50	0.5	16.10	0.2	18.70	0.1		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

WORKING CURVE
FOR POND NO.PONDB12

DT= 0.10 HRS

ELEV (FT)	DISC. (CFS)	STORAGE S2 (AC FT)	S2 (CFS-HRS)	O2/2 (CFS)	S2/DT (CFS)	S2/DT+O2/2 (CFS)
28.00	0.0	0.00	0.0	0.0	0.0	0.0
29.00	2.3	0.06	0.7	1.2	7.0	8.2
30.00	4.6	0.15	1.8	2.3	18.0	20.3
31.00	6.1	0.25	3.0	3.1	30.0	33.1
32.00	7.3	0.39	4.7	3.7	47.0	50.7
33.00	8.3	0.54	6.5	4.2	65.0	69.2
34.00	9.1	0.72	8.7	4.6	87.0	91.6

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 2 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

POND ROUTING

HYDROGRAPH #AR2A
POND #PONDB12
STORM FREQUENCY: 2 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2		OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
			(CFS)	(CFS)			
11.00	0.0	0.0	0.0	0.0	0.0	28.00	0.00
11.10	0.0	0.0	0.0	0.0	0.0	28.00	0.00
11.20	0.0	0.0	0.0	0.0	0.0	28.00	0.00
11.30	0.0	0.0	0.0	0.0	0.0	28.00	0.00
11.40	0.0	0.0	0.0	0.0	0.0	28.00	0.00
11.50	0.0	0.0	0.0	0.0	0.0	28.00	0.00
11.60	0.0	0.0	0.0	0.0	0.0	28.00	0.00
11.70	0.0	0.0	0.0	0.0	0.0	28.00	0.00
11.80	0.0	0.0	0.0	0.0	0.0	28.00	0.00
11.90	0.0	0.0	0.0	0.0	0.0	28.00	0.00
12.00	0.0	0.0	0.0	0.0	0.0	28.00	0.00
12.10	0.0	0.0	0.0	0.0	0.0	28.00	0.00
12.20	0.0	0.0	0.0	0.0	0.0	28.00	0.00
12.30	0.0	0.0	0.0	0.0	0.0	28.00	0.00
12.40	0.0	0.0	0.0	0.0	0.0	28.00	0.00
12.50	0.0	0.0	0.0	0.0	0.0	28.00	0.00
12.60	0.0	0.0	0.0	0.0	0.0	28.00	0.00
12.70	0.0	0.0	0.0	0.0	0.0	28.00	0.00
12.80	0.0	0.0	0.0	0.0	0.0	28.00	0.00
12.90	0.0	0.0	0.0	0.0	0.0	28.00	0.00
13.00	0.0	0.0	0.0	0.0	0.0	28.00	0.00
13.10	0.0	0.0	0.0	0.0	0.0	28.00	0.00
13.20	0.0	0.0	0.0	0.0	0.0	28.00	0.00
13.30	0.2	0.1	0.1	0.0	0.0	28.01	0.00
13.40	0.5	0.4	0.5	0.1	0.1	28.06	0.00
13.50	0.5	0.5	0.9	0.3	0.3	28.11	0.01
13.60	0.5	0.5	1.1	0.3	0.3	28.13	0.01
13.70	0.5	0.5	1.3	0.4	0.4	28.16	0.01
13.80	0.5	0.5	1.4	0.4	0.4	28.17	0.01
13.90	0.5	0.5	1.5	0.4	0.4	28.18	0.01
14.00	0.5	0.5	1.6	0.4	0.4	28.20	0.01
14.10	0.4	0.5	1.7	0.5	0.5	28.21	0.01
14.20	0.4	0.4	1.6	0.4	0.4	28.20	0.01
14.30	0.4	0.4	1.6	0.4	0.4	28.20	0.01
14.40	0.4	0.4	1.6	0.4	0.4	28.20	0.01

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 3 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTING

HYDROGRAPH #AR2A
POND #PONDB12
STORM FREQUENCY: 2 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
14.60	0.4	0.4	1.6	0.4	28.20	0.01
14.70	0.3	0.4	1.6	0.4	28.20	0.01
14.80	0.3	0.3	1.5	0.4	28.18	0.01
14.90	0.3	0.3	1.4	0.4	28.17	0.01
15.00	0.3	0.3	1.3	0.4	28.16	0.01
15.10	0.3	0.3	1.2	0.3	28.15	0.01
15.20	0.3	0.3	1.2	0.3	28.15	0.01
15.30	0.3	0.3	1.2	0.3	28.15	0.01
15.40	0.3	0.3	1.2	0.3	28.15	0.01
15.50	0.3	0.3	1.2	0.3	28.15	0.01
15.60	0.3	0.3	1.2	0.3	28.15	0.01
15.70	0.3	0.3	1.2	0.3	28.15	0.01
15.80	0.3	0.3	1.2	0.3	28.15	0.01
15.90	0.3	0.3	1.2	0.3	28.15	0.01
16.00	0.2	0.3	1.2	0.3	28.15	0.01
16.10	0.2	0.2	1.1	0.3	28.13	0.01
16.20	0.2	0.2	1.0	0.3	28.12	0.01
16.30	0.2	0.2	0.9	0.3	28.11	0.01
16.40	0.2	0.2	0.8	0.2	28.10	0.01
16.50	0.2	0.2	0.8	0.2	28.10	0.01
16.60	0.2	0.2	0.8	0.2	28.10	0.01
16.70	0.2	0.2	0.8	0.2	28.10	0.01
16.80	0.2	0.2	0.8	0.2	28.10	0.01
16.90	0.2	0.2	0.8	0.2	28.10	0.01
17.00	0.2	0.2	0.8	0.2	28.10	0.01
17.10	0.2	0.2	0.8	0.2	28.10	0.01
17.20	0.2	0.2	0.8	0.2	28.10	0.01
17.30	0.2	0.2	0.8	0.2	28.10	0.01
17.40	0.2	0.2	0.8	0.2	28.10	0.01
17.50	0.2	0.2	0.8	0.2	28.10	0.01
17.60	0.2	0.2	0.8	0.2	28.10	0.01
17.70	0.2	0.2	0.8	0.2	28.10	0.01
17.80	0.2	0.2	0.8	0.2	28.10	0.01
17.90	0.1	0.2	0.8	0.2	28.10	0.01
18.00	0.1	0.1	0.7	0.2	28.09	0.00

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 4 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTINGHYDROGRAPH #AR2A
POND #PONDB12
STORM FREQUENCY: 2 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
18.20	0.1	0.1	0.5	0.1	28.06	0.00
18.30	0.1	0.1	0.5	0.1	28.06	0.00
18.40	0.1	0.1	0.5	0.1	28.06	0.00
18.50	0.1	0.1	0.5	0.1	28.06	0.00
18.60	0.1	0.1	0.5	0.1	28.06	0.00
18.70	0.1	0.1	0.5	0.1	28.06	0.00
18.80	0.1	0.1	0.5	0.1	28.06	0.00
18.90	0.1	0.1	0.5	0.1	28.06	0.00
19.00	0.1	0.1	0.5	0.1	28.06	0.00
19.10	0.1	0.1	0.5	0.1	28.06	0.00
19.20	0.1	0.1	0.5	0.1	28.06	0.00
19.30	0.1	0.1	0.5	0.1	28.06	0.00
19.40	0.1	0.1	0.5	0.1	28.06	0.00
19.50	0.1	0.1	0.5	0.1	28.06	0.00
19.60	0.1	0.1	0.5	0.1	28.06	0.00
19.70	0.1	0.1	0.5	0.1	28.06	0.00
19.80	0.1	0.1	0.5	0.1	28.06	0.00
19.90	0.1	0.1	0.5	0.1	28.06	0.00
20.00	0.1	0.1	0.5	0.1	28.06	0.00
20.10	0.1	0.1	0.5	0.1	28.06	0.00
20.20	0.1	0.1	0.5	0.1	28.06	0.00
20.30	0.1	0.1	0.5	0.1	28.06	0.00
20.40	0.1	0.1	0.5	0.1	28.06	0.00
20.50	0.1	0.1	0.5	0.1	28.06	0.00
20.60	0.1	0.1	0.5	0.1	28.06	0.00
20.70	0.1	0.1	0.5	0.1	28.06	0.00
20.80	0.1	0.1	0.5	0.1	28.06	0.00
20.90	0.1	0.1	0.5	0.1	28.06	0.00
21.00	0.1	0.1	0.5	0.1	28.06	0.00

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 5 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

HYDROGRAPH #AR2A
POND #PONDB12
STORM FREQUENCY: 2 YRS.

SUMMARY OF POND ROUTING RESULTS

PEAK INFLOW : 0.5 CFS @ T = 13.40 HRS.

PEAK DISCHARGE : 0.5 CFS @ T = 14.10 HRS.

PEAK STORAGE VOLUME : 0.01 AC.FT.

PEAK STORAGE ELEVATION : 28.21

FREEBOARD : 5.79 FT.

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 6 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

Hydrograph Name: AR2B

Storm Data

Drainage Area Data

Frequency :	2 Yrs.	Area:	4.6 Ac.	T.C.:	0.00 Hrs.
Rainfall :	3.75 In.	CN :	0	Ia/P:	0.00
Runoff :	0.00 In.	**** Hydrograph Status: Valid ****			

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.0	13.60	0.3	16.20	0.3	18.80	0.1
11.10	0.0	13.70	0.4	16.30	0.3	18.90	0.1
11.20	0.0	13.80	0.4	16.40	0.2	19.00	0.1
11.30	0.0	13.90	0.4	16.50	0.2	19.10	0.1
11.40	0.0	14.00	0.4	16.60	0.2	19.20	0.1
11.50	0.0	14.10	0.5	16.70	0.2	19.30	0.1
11.60	0.0	14.20	0.4	16.80	0.2	19.40	0.1
11.70	0.0	14.30	0.4	16.90	0.2	19.50	0.1
11.80	0.0	14.40	0.4	17.00	0.2	19.60	0.1
11.90	0.0	14.50	0.4	17.10	0.2	19.70	0.1
12.00	0.0	14.60	0.4	17.20	0.2	19.80	0.1
12.10	0.0	14.70	0.4	17.30	0.2	19.90	0.1
12.20	0.0	14.80	0.4	17.40	0.2	20.00	0.1
12.30	0.0	14.90	0.4	17.50	0.2	20.10	0.1
12.40	0.0	15.00	0.4	17.60	0.2	20.20	0.1
12.50	0.0	15.10	0.3	17.70	0.2	20.30	0.1
12.60	0.0	15.20	0.3	17.80	0.2	20.40	0.1
12.70	0.0	15.30	0.3	17.90	0.2	20.50	0.1
12.80	0.0	15.40	0.3	18.00	0.2	20.60	0.1
12.90	0.0	15.50	0.3	18.10	0.2	20.70	0.1
13.00	0.0	15.60	0.3	18.20	0.1	20.80	0.1
13.10	0.0	15.70	0.3	18.30	0.1	20.90	0.1
13.20	0.0	15.80	0.3	18.40	0.1	21.00	0.1
13.30	0.0	15.90	0.3	18.50	0.1		
13.40	0.1	16.00	0.3	18.60	0.1		
13.50	0.3	16.10	0.3	18.70	0.1		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

Hydrograph Name: AEX10

Storm Data

Drainage Area Data

Frequency :	10 Yrs.	Area:	4.6 Ac.	T.C.:	0.30 Hrs.
Rainfall :	5.00 In.	CN :	55	Ia/P:	0.10
Runoff :	0.98 In.	**** Hydrograph Status: Valid ****			

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.2	13.60	0.4	16.20	0.2	18.80	0.1
11.10	0.2	13.70	0.4	16.30	0.2	18.90	0.1
11.20	0.2	13.80	0.4	16.40	0.2	19.00	0.1
11.30	0.2	13.90	0.4	16.50	0.2	19.10	0.1
11.40	0.2	14.00	0.4	16.60	0.2	19.20	0.1
11.50	0.3	14.10	0.4	16.70	0.2	19.30	0.1
11.60	0.3	14.20	0.3	16.80	0.2	19.40	0.1
11.70	0.4	14.30	0.3	16.90	0.2	19.50	0.1
11.80	0.5	14.40	0.3	17.00	0.2	19.60	0.1
11.90	0.6	14.50	0.3	17.10	0.2	19.70	0.1
12.00	0.9	14.60	0.3	17.20	0.1	19.80	0.1
12.10	1.3	14.70	0.3	17.30	0.1	19.90	0.1
12.20	2.0	14.80	0.3	17.40	0.1	20.00	0.1
12.30	3.1	14.90	0.3	17.50	0.1	20.10	0.1
12.40	3.5	15.00	0.3	17.60	0.1	20.20	0.1
12.50	3.2	15.10	0.3	17.70	0.1	20.30	0.1
12.60	2.5	15.20	0.3	17.80	0.1	20.40	0.1
12.70	1.9	15.30	0.3	17.90	0.1	20.50	0.1
12.80	1.4	15.40	0.2	18.00	0.1	20.60	0.1
12.90	1.1	15.50	0.2	18.10	0.1	20.70	0.1
13.00	0.8	15.60	0.2	18.20	0.1	20.80	0.1
13.10	0.7	15.70	0.2	18.30	0.1	20.90	0.1
13.20	0.6	15.80	0.2	18.40	0.1	21.00	0.1
13.30	0.6	15.90	0.2	18.50	0.1		
13.40	0.5	16.00	0.2	18.60	0.1		
13.50	0.5	16.10	0.2	18.70	0.1		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB
CHECKED BY : CTB

Hydrograph Name: APR10

Storm Data

Frequency :	10 Yrs.	Area:	4.6 Ac.	T.C.:	0.30 Hrs.
Rainfall :	5.00 In.	CN :	69	Ia/P:	0.10
Runoff :	1.96 In.	**** Hydrograph Status: Valid ****			

Drainage Area Data

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.3	13.60	0.9	16.20	0.4	18.80	0.2
11.10	0.4	13.70	0.9	16.30	0.4	18.90	0.2
11.20	0.4	13.80	0.8	16.40	0.3	19.00	0.2
11.30	0.4	13.90	0.8	16.50	0.3	19.10	0.2
11.40	0.5	14.00	0.8	16.60	0.3	19.20	0.2
11.50	0.6	14.10	0.7	16.70	0.3	19.30	0.2
11.60	0.6	14.20	0.7	16.80	0.3	19.40	0.2
11.70	0.8	14.30	0.7	16.90	0.3	19.50	0.2
11.80	1.0	14.40	0.7	17.00	0.3	19.60	0.2
11.90	1.2	14.50	0.6	17.10	0.3	19.70	0.2
12.00	1.7	14.60	0.6	17.20	0.3	19.80	0.2
12.10	2.5	14.70	0.6	17.30	0.3	19.90	0.2
12.20	4.0	14.80	0.6	17.40	0.3	20.00	0.2
12.30	6.2	14.90	0.6	17.50	0.3	20.10	0.2
12.40	7.0	15.00	0.5	17.60	0.3	20.20	0.2
12.50	6.3	15.10	0.5	17.70	0.3	20.30	0.2
12.60	5.0	15.20	0.5	17.80	0.3	20.40	0.2
12.70	3.9	15.30	0.5	17.90	0.3	20.50	0.2
12.80	2.9	15.40	0.5	18.00	0.2	20.60	0.2
12.90	2.3	15.50	0.5	18.10	0.2	20.70	0.2
13.00	1.7	15.60	0.5	18.20	0.2	20.80	0.2
13.10	1.4	15.70	0.4	18.30	0.2	20.90	0.2
13.20	1.2	15.80	0.4	18.40	0.2	21.00	0.2
13.30	1.1	15.90	0.4	18.50	0.2		
13.40	1.0	16.00	0.4	18.60	0.2		
13.50	0.9	16.10	0.4	18.70	0.2		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

WORKING CURVE
FOR POND NO.PONDA18

DT= 0.10 HRS

STORAGE

ELEV (FT)	DISC. (CFS)	S2 (AC FT)	S2 (CFS-HRS)	O2/2 (CFS)	S2/DT (CFS)	S2/DT+O2/2 (CFS)
48.00	0.0	0.00	0.0	0.0	0.0	0.0
49.00	0.0	0.07	0.8	0.0	8.0	8.0
50.00	0.0	0.16	1.9	0.0	19.0	19.0
51.00	0.0	0.25	3.0	0.0	30.0	30.0
52.00	15.5	0.37	4.5	7.8	45.0	52.8

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 2 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTING

HYDROGRAPH #APR10
POND #PONDA18
STORM FREQUENCY: 10 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
11.00	0.3	0.2	0.2	0.0	48.03	0.00
11.10	0.4	0.4	0.6	0.0	48.08	0.00
11.20	0.4	0.4	1.0	0.0	48.13	0.01
11.30	0.4	0.4	1.4	0.0	48.18	0.01
11.40	0.5	0.5	1.9	0.0	48.24	0.02
11.50	0.6	0.6	2.5	0.0	48.31	0.02
11.60	0.6	0.6	3.1	0.0	48.39	0.03
11.70	0.8	0.7	3.8	0.0	48.48	0.03
11.80	1.0	0.9	4.7	0.0	48.59	0.04
11.90	1.2	1.1	5.8	0.0	48.73	0.05
12.00	1.7	1.5	7.3	0.0	48.91	0.06
12.10	2.5	2.1	9.4	0.0	49.13	0.08
12.20	4.0	3.3	12.7	0.0	49.43	0.10
12.30	6.2	5.1	17.8	0.0	49.89	0.15
12.40	7.0	6.6	24.4	0.0	50.49	0.20
12.50	6.3	6.7	31.1	0.7	51.05	0.25
12.60	5.0	5.7	36.1	4.1	51.27	0.28
12.70	3.9	4.5	36.5	4.4	51.29	0.28
12.80	2.9	3.4	35.5	3.7	51.24	0.28
12.90	2.3	2.6	34.4	3.0	51.19	0.27
13.00	1.7	2.0	33.4	2.3	51.15	0.27
13.10	1.4	1.6	32.7	1.8	51.12	0.26
13.20	1.2	1.3	32.2	1.5	51.10	0.26
13.30	1.1	1.2	31.9	1.3	51.08	0.26
13.40	1.0	1.1	31.7	1.2	51.07	0.26
13.50	0.9	1.0	31.5	1.0	51.07	0.26
13.60	0.9	0.9	31.4	1.0	51.06	0.26
13.70	0.9	0.9	31.3	0.9	51.06	0.25
13.80	0.8	0.9	31.3	0.9	51.06	0.25
13.90	0.8	0.8	31.2	0.8	51.05	0.25
14.00	0.8	0.8	31.2	0.8	51.05	0.25
14.10	0.7	0.8	31.2	0.8	51.05	0.25
14.20	0.7	0.7	31.1	0.7	51.05	0.25
14.30	0.7	0.7	31.1	0.7	51.05	0.25
14.40	0.7	0.7	31.1	0.7	51.05	0.25

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 3 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

===== POND ROUTING =====

HYDROGRAPH #APR10
POND #PONDA18
STORM FREQUENCY: 10 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
14.60	0.6	0.6	31.0	0.7	51.04	0.25
14.70	0.6	0.6	30.9	0.6	51.04	0.25
14.80	0.6	0.6	30.9	0.6	51.04	0.25
14.90	0.6	0.6	30.9	0.6	51.04	0.25
15.00	0.5	0.6	30.9	0.6	51.04	0.25
15.10	0.5	0.5	30.8	0.5	51.04	0.25
15.20	0.5	0.5	30.8	0.5	51.04	0.25
15.30	0.5	0.5	30.8	0.5	51.04	0.25
15.40	0.5	0.5	30.8	0.5	51.04	0.25
15.50	0.5	0.5	30.8	0.5	51.04	0.25
15.60	0.5	0.5	30.8	0.5	51.04	0.25
15.70	0.4	0.5	30.8	0.5	51.04	0.25
15.80	0.4	0.4	30.7	0.5	51.03	0.25
15.90	0.4	0.4	30.6	0.4	51.03	0.25
16.00	0.4	0.4	30.6	0.4	51.03	0.25
16.10	0.4	0.4	30.6	0.4	51.03	0.25
16.20	0.4	0.4	30.6	0.4	51.03	0.25
16.30	0.4	0.4	30.6	0.4	51.03	0.25
16.40	0.3	0.4	30.6	0.4	51.03	0.25
16.50	0.3	0.3	30.5	0.3	51.02	0.25
16.60	0.3	0.3	30.5	0.3	51.02	0.25
16.70	0.3	0.3	30.5	0.3	51.02	0.25
16.80	0.3	0.3	30.5	0.3	51.02	0.25
16.90	0.3	0.3	30.5	0.3	51.02	0.25
17.00	0.3	0.3	30.5	0.3	51.02	0.25
17.10	0.3	0.3	30.5	0.3	51.02	0.25
17.20	0.3	0.3	30.5	0.3	51.02	0.25
17.30	0.3	0.3	30.5	0.3	51.02	0.25
17.40	0.3	0.3	30.5	0.3	51.02	0.25
17.50	0.3	0.3	30.5	0.3	51.02	0.25
17.60	0.3	0.3	30.5	0.3	51.02	0.25
17.70	0.3	0.3	30.5	0.3	51.02	0.25
17.80	0.3	0.3	30.5	0.3	51.02	0.25
17.90	0.3	0.3	30.5	0.3	51.02	0.25
18.00	0.2	0.3	30.5	0.3	51.02	0.25

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 4 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTINGHYDROGRAPH #APR10
POND #PONDA18
STORM FREQUENCY: 10 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
18.20	0.2	0.2	30.3	0.2	51.01	0.25
18.30	0.2	0.2	30.3	0.2	51.01	0.25
18.40	0.2	0.2	30.3	0.2	51.01	0.25
18.50	0.2	0.2	30.3	0.2	51.01	0.25
18.60	0.2	0.2	30.3	0.2	51.01	0.25
18.70	0.2	0.2	30.3	0.2	51.01	0.25
18.80	0.2	0.2	30.3	0.2	51.01	0.25
18.90	0.2	0.2	30.3	0.2	51.01	0.25
19.00	0.2	0.2	30.3	0.2	51.01	0.25
19.10	0.2	0.2	30.3	0.2	51.01	0.25
19.20	0.2	0.2	30.3	0.2	51.01	0.25
19.30	0.2	0.2	30.3	0.2	51.01	0.25
19.40	0.2	0.2	30.3	0.2	51.01	0.25
19.50	0.2	0.2	30.3	0.2	51.01	0.25
19.60	0.2	0.2	30.3	0.2	51.01	0.25
19.70	0.2	0.2	30.3	0.2	51.01	0.25
19.80	0.2	0.2	30.3	0.2	51.01	0.25
19.90	0.2	0.2	30.3	0.2	51.01	0.25
20.00	0.2	0.2	30.3	0.2	51.01	0.25
20.10	0.2	0.2	30.3	0.2	51.01	0.25
20.20	0.2	0.2	30.3	0.2	51.01	0.25
20.30	0.2	0.2	30.3	0.2	51.01	0.25
20.40	0.2	0.2	30.3	0.2	51.01	0.25
20.50	0.2	0.2	30.3	0.2	51.01	0.25
20.60	0.2	0.2	30.3	0.2	51.01	0.25
20.70	0.2	0.2	30.3	0.2	51.01	0.25
20.80	0.2	0.2	30.3	0.2	51.01	0.25
20.90	0.2	0.2	30.3	0.2	51.01	0.25
21.00	0.2	0.2	30.3	0.2	51.01	0.25

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 5 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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HYDROGRAPH #APR10
POND #PONDA18
STORM FREQUENCY: 10 YRS.

SUMMARY OF POND ROUTING RESULTS

PEAK INFLOW : 7.0 CFS @ T = 12.40 HRS.

PEAK DISCHARGE : 4.4 CFS @ T = 12.70 HRS.

PEAK STORAGE VOLUME : 0.28 AC.FT.

PEAK STORAGE ELEVATION : 51.29

FREEBOARD : 0.71 FT.

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 6 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

Hydrograph Name: AR10A

Storm Data

Drainage Area Data

Frequency : 10 Yrs.
 Rainfall : 5.00 In.
 Runoff : 0.00 In.

Area: 4.6 Ac. T.C.: 0.00 Hrs.
 CN : 0 Ia/P: 0.00
 **** Hydrograph Status: Valid ****

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.0	13.60	1.0	16.20	0.4	18.80	0.2
11.10	0.0	13.70	0.9	16.30	0.4	18.90	0.2
11.20	0.0	13.80	0.9	16.40	0.4	19.00	0.2
11.30	0.0	13.90	0.8	16.50	0.3	19.10	0.2
11.40	0.0	14.00	0.8	16.60	0.3	19.20	0.2
11.50	0.0	14.10	0.8	16.70	0.3	19.30	0.2
11.60	0.0	14.20	0.7	16.80	0.3	19.40	0.2
11.70	0.0	14.30	0.7	16.90	0.3	19.50	0.2
11.80	0.0	14.40	0.7	17.00	0.3	19.60	0.2
11.90	0.0	14.50	0.7	17.10	0.3	19.70	0.2
12.00	0.0	14.60	0.7	17.20	0.3	19.80	0.2
12.10	0.0	14.70	0.6	17.30	0.3	19.90	0.2
12.20	0.0	14.80	0.6	17.40	0.3	20.00	0.2
12.30	0.0	14.90	0.6	17.50	0.3	20.10	0.2
12.40	0.0	15.00	0.6	17.60	0.3	20.20	0.2
12.50	0.7	15.10	0.5	17.70	0.3	20.30	0.2
12.60	4.1	15.20	0.5	17.80	0.3	20.40	0.2
12.70	4.4	15.30	0.5	17.90	0.3	20.50	0.2
12.80	3.7	15.40	0.5	18.00	0.3	20.60	0.2
12.90	3.0	15.50	0.5	18.10	0.3	20.70	0.2
13.00	2.3	15.60	0.5	18.20	0.2	20.80	0.2
13.10	1.8	15.70	0.5	18.30	0.2	20.90	0.2
13.20	1.5	15.80	0.5	18.40	0.2	21.00	0.2
13.30	1.3	15.90	0.4	18.50	0.2		
13.40	1.2	16.00	0.4	18.60	0.2		
13.50	1.0	16.10	0.4	18.70	0.2		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

WORKING CURVE
FOR POND NO.PONDB12

DT= 0.10 HRS

ELEV (FT)	DISC. (CFS)	S2 (AC FT)	S2 (CFS-HRS)	O2/2 (CFS)	S2/DT (CFS)	S2/DT+O2/2 (CFS)
28.00	0.0	0.00	0.0	0.0	0.0	0.0
29.00	2.3	0.06	0.7	1.2	7.0	8.2
30.00	4.6	0.15	1.8	2.3	18.0	20.3
31.00	6.1	0.25	3.0	3.1	30.0	33.1
32.00	7.3	0.39	4.7	3.7	47.0	50.7
33.00	8.3	0.54	6.5	4.2	65.0	69.2
34.00	9.1	0.72	8.7	4.6	87.0	91.6

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 2 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

POND ROUTING

HYDROGRAPH #AR10A
 POND #PONDB12
 STORM FREQUENCY: 10 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
11.00	0.0	0.0	0.0	0.0	28.00	0.00
11.10	0.0	0.0	0.0	0.0	28.00	0.00
11.20	0.0	0.0	0.0	0.0	28.00	0.00
11.30	0.0	0.0	0.0	0.0	28.00	0.00
11.40	0.0	0.0	0.0	0.0	28.00	0.00
11.50	0.0	0.0	0.0	0.0	28.00	0.00
11.60	0.0	0.0	0.0	0.0	28.00	0.00
11.70	0.0	0.0	0.0	0.0	28.00	0.00
11.80	0.0	0.0	0.0	0.0	28.00	0.00
11.90	0.0	0.0	0.0	0.0	28.00	0.00
12.00	0.0	0.0	0.0	0.0	28.00	0.00
12.10	0.0	0.0	0.0	0.0	28.00	0.00
12.20	0.0	0.0	0.0	0.0	28.00	0.00
12.30	0.0	0.0	0.0	0.0	28.00	0.00
12.40	0.0	0.0	0.0	0.0	28.00	0.00
12.50	0.7	0.4	0.4	0.1	28.05	0.00
12.60	4.1	2.4	2.7	0.8	28.33	0.02
12.70	4.4	4.3	6.2	1.7	28.76	0.04
12.80	3.7	4.1	8.6	2.4	29.03	0.06
12.90	3.0	3.4	9.6	2.6	29.12	0.07
13.00	2.3	2.7	9.7	2.6	29.12	0.07
13.10	1.8	2.1	9.2	2.5	29.08	0.07
13.20	1.5	1.7	8.4	2.3	29.02	0.06
13.30	1.3	1.4	7.5	2.1	28.91	0.05
13.40	1.2	1.3	6.7	1.9	28.82	0.05
13.50	1.0	1.1	5.9	1.7	28.72	0.04
13.60	1.0	1.0	5.2	1.5	28.63	0.04
13.70	0.9	1.0	4.7	1.3	28.57	0.03
13.80	0.9	0.9	4.3	1.2	28.52	0.03
13.90	0.8	0.9	4.0	1.1	28.49	0.03
14.00	0.8	0.8	3.7	1.0	28.45	0.03
14.10	0.8	0.8	3.5	1.0	28.43	0.02
14.20	0.7	0.8	3.3	0.9	28.40	0.02
14.30	0.7	0.7	3.1	0.9	28.38	0.02
14.40	0.7	0.7	2.9	0.8	28.35	0.02

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 3 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTINGHYDROGRAPH #AR10A
POND #PONDB12
STORM FREQUENCY: 10 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
14.60	0.7	0.7	2.7	0.8	28.33	0.02
14.70	0.6	0.7	2.6	0.7	28.32	0.02
14.80	0.6	0.6	2.5	0.7	28.30	0.02
14.90	0.6	0.6	2.4	0.7	28.29	0.02
15.00	0.6	0.6	2.3	0.6	28.28	0.02
15.10	0.5	0.6	2.3	0.6	28.28	0.02
15.20	0.5	0.5	2.2	0.6	28.27	0.02
15.30	0.5	0.5	2.1	0.6	28.26	0.01
15.40	0.5	0.5	2.0	0.6	28.24	0.01
15.50	0.5	0.5	1.9	0.5	28.23	0.01
15.60	0.5	0.5	1.9	0.5	28.23	0.01
15.70	0.5	0.5	1.9	0.5	28.23	0.01
15.80	0.5	0.5	1.9	0.5	28.23	0.01
15.90	0.4	0.5	1.9	0.5	28.23	0.01
16.00	0.4	0.4	1.8	0.5	28.22	0.01
16.10	0.4	0.4	1.7	0.5	28.21	0.01
16.20	0.4	0.4	1.6	0.4	28.20	0.01
16.30	0.4	0.4	1.6	0.4	28.20	0.01
16.40	0.4	0.4	1.6	0.4	28.20	0.01
16.50	0.3	0.4	1.6	0.4	28.20	0.01
16.60	0.3	0.3	1.5	0.4	28.18	0.01
16.70	0.3	0.3	1.4	0.4	28.17	0.01
16.80	0.3	0.3	1.3	0.4	28.16	0.01
16.90	0.3	0.3	1.2	0.3	28.15	0.01
17.00	0.3	0.3	1.2	0.3	28.15	0.01
17.10	0.3	0.3	1.2	0.3	28.15	0.01
17.20	0.3	0.3	1.2	0.3	28.15	0.01
17.30	0.3	0.3	1.2	0.3	28.15	0.01
17.40	0.3	0.3	1.2	0.3	28.15	0.01
17.50	0.3	0.3	1.2	0.3	28.15	0.01
17.60	0.3	0.3	1.2	0.3	28.15	0.01
17.70	0.3	0.3	1.2	0.3	28.15	0.01
17.80	0.3	0.3	1.2	0.3	28.15	0.01
17.90	0.3	0.3	1.2	0.3	28.15	0.01
18.00	0.3	0.3	1.2	0.3	28.15	0.01

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 4 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

===== POND ROUTING =====

HYDROGRAPH #AR10A
POND #PONDB12
STORM FREQUENCY: 10 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
18.20	0.2	0.3	1.2	0.3	28.15	0.01
18.30	0.2	0.2	1.1	0.3	28.13	0.01
18.40	0.2	0.2	1.0	0.3	28.12	0.01
18.50	0.2	0.2	0.9	0.3	28.11	0.01
18.60	0.2	0.2	0.8	0.2	28.10	0.01
18.70	0.2	0.2	0.8	0.2	28.10	0.01
18.80	0.2	0.2	0.8	0.2	28.10	0.01
18.90	0.2	0.2	0.8	0.2	28.10	0.01
19.00	0.2	0.2	0.8	0.2	28.10	0.01
19.10	0.2	0.2	0.8	0.2	28.10	0.01
19.20	0.2	0.2	0.8	0.2	28.10	0.01
19.30	0.2	0.2	0.8	0.2	28.10	0.01
19.40	0.2	0.2	0.8	0.2	28.10	0.01
19.50	0.2	0.2	0.8	0.2	28.10	0.01
19.60	0.2	0.2	0.8	0.2	28.10	0.01
19.70	0.2	0.2	0.8	0.2	28.10	0.01
19.80	0.2	0.2	0.8	0.2	28.10	0.01
19.90	0.2	0.2	0.8	0.2	28.10	0.01
20.00	0.2	0.2	0.8	0.2	28.10	0.01
20.10	0.2	0.2	0.8	0.2	28.10	0.01
20.20	0.2	0.2	0.8	0.2	28.10	0.01
20.30	0.2	0.2	0.8	0.2	28.10	0.01
20.40	0.2	0.2	0.8	0.2	28.10	0.01
20.50	0.2	0.2	0.8	0.2	28.10	0.01
20.60	0.2	0.2	0.8	0.2	28.10	0.01
20.70	0.2	0.2	0.8	0.2	28.10	0.01
20.80	0.2	0.2	0.8	0.2	28.10	0.01
20.90	0.2	0.2	0.8	0.2	28.10	0.01
21.00	0.2	0.2	0.8	0.2	28.10	0.01

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 5 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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HYDROGRAPH #AR10A
POND #PONDB12
STORM FREQUENCY: 10 YRS.

SUMMARY OF POND ROUTING RESULTS

PEAK INFLOW : 4.4 CFS @ T = 12.70 HRS.

PEAK DISCHARGE : 2.6 CFS @ T = 12.90 HRS.

PEAK STORAGE VOLUME : 0.07 AC.FT.

PEAK STORAGE ELEVATION : 29.12

FREEBOARD : 4.88 FT.

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 6 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

Hydrograph Name: AR10B

Storm Data

Drainage Area Data

Frequency :	10 Yrs.	Area:	4.6 Ac.	T.C.:	0.00 Hrs.
Rainfall :	5.00 In.	CN :	0	Ia/P:	0.00
Runoff :	0.00 In.	***** Hydrograph Status: Valid *****			

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.0	13.60	1.5	16.20	0.4	18.80	0.2
11.10	0.0	13.70	1.3	16.30	0.4	18.90	0.2
11.20	0.0	13.80	1.2	16.40	0.4	19.00	0.2
11.30	0.0	13.90	1.1	16.50	0.4	19.10	0.2
11.40	0.0	14.00	1.0	16.60	0.4	19.20	0.2
11.50	0.0	14.10	1.0	16.70	0.4	19.30	0.2
11.60	0.0	14.20	0.9	16.80	0.4	19.40	0.2
11.70	0.0	14.30	0.9	16.90	0.3	19.50	0.2
11.80	0.0	14.40	0.8	17.00	0.3	19.60	0.2
11.90	0.0	14.50	0.8	17.10	0.3	19.70	0.2
12.00	0.0	14.60	0.8	17.20	0.3	19.80	0.2
12.10	0.0	14.70	0.7	17.30	0.3	19.90	0.2
12.20	0.0	14.80	0.7	17.40	0.3	20.00	0.2
12.30	0.0	14.90	0.7	17.50	0.3	20.10	0.2
12.40	0.0	15.00	0.6	17.60	0.3	20.20	0.2
12.50	0.1	15.10	0.6	17.70	0.3	20.30	0.2
12.60	0.8	15.20	0.6	17.80	0.3	20.40	0.2
12.70	1.7	15.30	0.6	17.90	0.3	20.50	0.2
12.80	2.4	15.40	0.6	18.00	0.3	20.60	0.2
12.90	2.6	15.50	0.5	18.10	0.3	20.70	0.2
13.00	2.6	15.60	0.5	18.20	0.3	20.80	0.2
13.10	2.5	15.70	0.5	18.30	0.3	20.90	0.2
13.20	2.3	15.80	0.5	18.40	0.3	21.00	0.2
13.30	2.1	15.90	0.5	18.50	0.3		
13.40	1.9	16.00	0.5	18.60	0.2		
13.50	1.7	16.10	0.5	18.70	0.2		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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Hydrograph Name: AEX25

Storm Data

Drainage Area Data

Frequency :	25 Yrs.	Area:	4.6 Ac.	T.C.:	0.30 Hrs.
Rainfall :	6.50 In.	CN :	55	Ia/P:	0.10
Runoff :	1.81 In.	***** Hydrograph Status: Valid *****			

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.3	13.60	0.8	16.20	0.3	18.80	0.2
11.10	0.3	13.70	0.8	16.30	0.3	18.90	0.2
11.20	0.4	13.80	0.7	16.40	0.3	19.00	0.2
11.30	0.4	13.90	0.7	16.50	0.3	19.10	0.2
11.40	0.5	14.00	0.7	16.60	0.3	19.20	0.2
11.50	0.5	14.10	0.7	16.70	0.3	19.30	0.2
11.60	0.6	14.20	0.6	16.80	0.3	19.40	0.2
11.70	0.7	14.30	0.6	16.90	0.3	19.50	0.2
11.80	0.9	14.40	0.6	17.00	0.3	19.60	0.2
11.90	1.1	14.50	0.6	17.10	0.3	19.70	0.2
12.00	1.6	14.60	0.6	17.20	0.3	19.80	0.2
12.10	2.3	14.70	0.6	17.30	0.3	19.90	0.2
12.20	3.7	14.80	0.5	17.40	0.3	20.00	0.2
12.30	5.7	14.90	0.5	17.50	0.3	20.10	0.2
12.40	6.4	15.00	0.5	17.60	0.2	20.20	0.2
12.50	5.8	15.10	0.5	17.70	0.2	20.30	0.2
12.60	4.6	15.20	0.5	17.80	0.2	20.40	0.2
12.70	3.6	15.30	0.5	17.90	0.2	20.50	0.2
12.80	2.6	15.40	0.5	18.00	0.2	20.60	0.2
12.90	2.1	15.50	0.4	18.10	0.2	20.70	0.2
13.00	1.5	15.60	0.4	18.20	0.2	20.80	0.2
13.10	1.3	15.70	0.4	18.30	0.2	20.90	0.2
13.20	1.1	15.80	0.4	18.40	0.2	21.00	0.2
13.30	1.0	15.90	0.4	18.50	0.2		
13.40	0.9	16.00	0.4	18.60	0.2		
13.50	0.9	16.10	0.4	18.70	0.2		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

Hydrograph Name: APR25

Storm Data

Drainage Area Data

Frequency :	25 Yrs.	Area:	4.6 Ac.	T.C.:	0.30 Hrs.
Rainfall :	6.50 In.	CN :	69	Ia/P:	0.10
Runoff :	3.11 In.	**** Hydrograph Status: Valid ****			

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.6	13.60	1.4	16.20	0.6	18.80	0.3
11.10	0.6	13.70	1.4	16.30	0.6	18.90	0.3
11.20	0.6	13.80	1.3	16.40	0.6	19.00	0.3
11.30	0.7	13.90	1.2	16.50	0.5	19.10	0.3
11.40	0.8	14.00	1.2	16.60	0.5	19.20	0.3
11.50	0.9	14.10	1.2	16.70	0.5	19.30	0.3
11.60	1.0	14.20	1.1	16.80	0.5	19.40	0.3
11.70	1.3	14.30	1.1	16.90	0.5	19.50	0.3
11.80	1.6	14.40	1.0	17.00	0.5	19.60	0.3
11.90	1.9	14.50	1.0	17.10	0.5	19.70	0.3
12.00	2.8	14.60	1.0	17.20	0.5	19.80	0.3
12.10	4.0	14.70	1.0	17.30	0.5	19.90	0.3
12.20	6.4	14.80	0.9	17.40	0.4	20.00	0.3
12.30	9.8	14.90	0.9	17.50	0.4	20.10	0.3
12.40	11.1	15.00	0.9	17.60	0.4	20.20	0.3
12.50	10.0	15.10	0.8	17.70	0.4	20.30	0.3
12.60	8.0	15.20	0.8	17.80	0.4	20.40	0.3
12.70	6.1	15.30	0.8	17.90	0.4	20.50	0.3
12.80	4.5	15.40	0.8	18.00	0.4	20.60	0.3
12.90	3.6	15.50	0.8	18.10	0.4	20.70	0.3
13.00	2.6	15.60	0.7	18.20	0.4	20.80	0.3
13.10	2.3	15.70	0.7	18.30	0.4	20.90	0.3
13.20	1.9	15.80	0.7	18.40	0.4	21.00	0.3
13.30	1.8	15.90	0.7	18.50	0.4		
13.40	1.6	16.00	0.6	18.60	0.3		
13.50	1.5	16.10	0.6	18.70	0.3		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

WORKING CURVE
FOR POND NO.PONDA18

DT= 0.10 HRS

STORAGE

ELEV (FT)	DISC. (CFS)	S2 (AC FT)	S2 (CFS-HRS)	O2/2 (CFS)	S2/DT (CFS)	S2/DT+O2/2 (CFS)
48.00	0.0	0.00	0.0	0.0	0.0	0.0
49.00	0.0	0.07	0.8	0.0	8.0	8.0
50.00	0.0	0.16	1.9	0.0	19.0	19.0
51.00	0.0	0.25	3.0	0.0	30.0	30.0
52.00	15.5	0.37	4.5	7.8	45.0	52.8

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 2 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTING

HYDROGRAPH #
POND #PONDA18
STORM FREQUENCY: 25 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
11.00	0.6	0.3	0.3	0.0	48.04	0.00
11.10	0.6	0.6	0.9	0.0	48.11	0.01
11.20	0.6	0.6	1.5	0.0	48.19	0.01
11.30	0.7	0.7	2.2	0.0	48.28	0.02
11.40	0.8	0.8	3.0	0.0	48.38	0.02
11.50	0.9	0.9	3.9	0.0	48.49	0.03
11.60	1.0	1.0	4.9	0.0	48.61	0.04
11.70	1.3	1.2	6.1	0.0	48.76	0.05
11.80	1.6	1.5	7.6	0.0	48.95	0.06
11.90	1.9	1.8	9.4	0.0	49.13	0.08
12.00	2.8	2.4	11.8	0.0	49.35	0.10
12.10	4.0	3.4	15.2	0.0	49.65	0.13
12.20	6.4	5.2	20.4	0.0	50.13	0.17
12.30	9.8	8.1	28.5	0.0	50.86	0.24
12.40	11.1	10.5	39.0	6.1	51.39	0.30
12.50	10.0	10.6	43.5	9.2	51.59	0.32
12.60	8.0	9.0	43.3	9.0	51.58	0.32
12.70	6.1	7.1	41.4	7.7	51.50	0.31
12.80	4.5	5.3	39.0	6.1	51.39	0.30
12.90	3.6	4.1	37.0	4.8	51.31	0.29
13.00	2.6	3.1	35.3	3.6	51.23	0.28
13.10	2.3	2.4	34.1	2.8	51.18	0.27
13.20	1.9	2.1	33.4	2.3	51.15	0.27
13.30	1.8	1.9	33.0	2.0	51.13	0.26
13.40	1.6	1.7	32.7	1.8	51.12	0.26
13.50	1.5	1.6	32.5	1.7	51.11	0.26
13.60	1.4	1.5	32.3	1.6	51.10	0.26
13.70	1.4	1.4	32.1	1.4	51.09	0.26
13.80	1.3	1.3	32.0	1.4	51.09	0.26
13.90	1.2	1.3	31.9	1.3	51.08	0.26
14.00	1.2	1.2	31.8	1.2	51.08	0.26
14.10	1.2	1.2	31.8	1.2	51.08	0.26
14.20	1.1	1.2	31.8	1.2	51.08	0.26
14.30	1.1	1.1	31.7	1.2	51.07	0.26
14.40	1.0	1.1	31.6	1.1	51.07	0.26

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 3 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

POND ROUTING

HYDROGRAPH #
POND #PONDA18
STORM FREQUENCY: 25 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
14.60	1.0	1.0	31.5	1.0	51.07	0.26
14.70	1.0	1.0	31.5	1.0	51.07	0.26
14.80	0.9	1.0	31.5	1.0	51.07	0.26
14.90	0.9	0.9	31.4	1.0	51.06	0.26
15.00	0.9	0.9	31.3	0.9	51.06	0.25
15.10	0.8	0.9	31.3	0.9	51.06	0.25
15.20	0.8	0.8	31.2	0.8	51.05	0.25
15.30	0.8	0.8	31.2	0.8	51.05	0.25
15.40	0.8	0.8	31.2	0.8	51.05	0.25
15.50	0.8	0.8	31.2	0.8	51.05	0.25
15.60	0.7	0.8	31.2	0.8	51.05	0.25
15.70	0.7	0.7	31.1	0.7	51.05	0.25
15.80	0.7	0.7	31.1	0.7	51.05	0.25
15.90	0.7	0.7	31.1	0.7	51.05	0.25
16.00	0.6	0.7	31.1	0.7	51.05	0.25
16.10	0.6	0.6	31.0	0.7	51.04	0.25
16.20	0.6	0.6	30.9	0.6	51.04	0.25
16.30	0.6	0.6	30.9	0.6	51.04	0.25
16.40	0.6	0.6	30.9	0.6	51.04	0.25
16.50	0.5	0.6	30.9	0.6	51.04	0.25
16.60	0.5	0.5	30.8	0.5	51.04	0.25
16.70	0.5	0.5	30.8	0.5	51.04	0.25
16.80	0.5	0.5	30.8	0.5	51.04	0.25
16.90	0.5	0.5	30.8	0.5	51.04	0.25
17.00	0.5	0.5	30.8	0.5	51.04	0.25
17.10	0.5	0.5	30.8	0.5	51.04	0.25
17.20	0.5	0.5	30.8	0.5	51.04	0.25
17.30	0.5	0.5	30.8	0.5	51.04	0.25
17.40	0.4	0.5	30.8	0.5	51.04	0.25
17.50	0.4	0.4	30.7	0.5	51.03	0.25
17.60	0.4	0.4	30.6	0.4	51.03	0.25
17.70	0.4	0.4	30.6	0.4	51.03	0.25
17.80	0.4	0.4	30.6	0.4	51.03	0.25
17.90	0.4	0.4	30.6	0.4	51.03	0.25
18.00	0.4	0.4	30.6	0.4	51.03	0.25

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 4 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTING

HYDROGRAPH #
POND #PONDA18
STORM FREQUENCY: 25 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
18.20	0.4	0.4	30.6	0.4	51.03	0.25
18.30	0.4	0.4	30.6	0.4	51.03	0.25
18.40	0.4	0.4	30.6	0.4	51.03	0.25
18.50	0.4	0.4	30.6	0.4	51.03	0.25
18.60	0.3	0.4	30.6	0.4	51.03	0.25
18.70	0.3	0.3	30.5	0.3	51.02	0.25
18.80	0.3	0.3	30.5	0.3	51.02	0.25
18.90	0.3	0.3	30.5	0.3	51.02	0.25
19.00	0.3	0.3	30.5	0.3	51.02	0.25
19.10	0.3	0.3	30.5	0.3	51.02	0.25
19.20	0.3	0.3	30.5	0.3	51.02	0.25
19.30	0.3	0.3	30.5	0.3	51.02	0.25
19.40	0.3	0.3	30.5	0.3	51.02	0.25
19.50	0.3	0.3	30.5	0.3	51.02	0.25
19.60	0.3	0.3	30.5	0.3	51.02	0.25
19.70	0.3	0.3	30.5	0.3	51.02	0.25
19.80	0.3	0.3	30.5	0.3	51.02	0.25
19.90	0.3	0.3	30.5	0.3	51.02	0.25
20.00	0.3	0.3	30.5	0.3	51.02	0.25
20.10	0.3	0.3	30.5	0.3	51.02	0.25
20.20	0.3	0.3	30.5	0.3	51.02	0.25
20.30	0.3	0.3	30.5	0.3	51.02	0.25
20.40	0.3	0.3	30.5	0.3	51.02	0.25
20.50	0.3	0.3	30.5	0.3	51.02	0.25
20.60	0.3	0.3	30.5	0.3	51.02	0.25
20.70	0.3	0.3	30.5	0.3	51.02	0.25
20.80	0.3	0.3	30.5	0.3	51.02	0.25
20.90	0.3	0.3	30.5	0.3	51.02	0.25
21.00	0.3	0.3	30.5	0.3	51.02	0.25

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 5 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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HYDROGRAPH #
POND #PONDA18
STORM FREQUENCY: 25 YRS.

SUMMARY OF POND ROUTING RESULTS

PEAK INFLOW : 11.1 CFS @ T = 12.40 HRS.

PEAK DISCHARGE : 9.2 CFS @ T = 12.50 HRS.

PEAK STORAGE VOLUME : 0.32 AC.FT.

PEAK STORAGE ELEVATION : 51.59

FREEBOARD : 0.41 FT.

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 6 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

Hydrograph Name: AR25A

Storm Data

Frequency : 25 Yrs.
Rainfall : 6.50 In.
Runoff : 0.00 In.

Drainage Area Data

Area: 4.6 Ac. T.C.: 0.00 Hrs.
CN : 0 Ia/P: 0.00
**** Hydrograph Status: Valid ****

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.0	13.60	1.6	16.20	0.6	18.80	0.3
11.10	0.0	13.70	1.4	16.30	0.6	18.90	0.3
11.20	0.0	13.80	1.4	16.40	0.6	19.00	0.3
11.30	0.0	13.90	1.3	16.50	0.6	19.10	0.3
11.40	0.0	14.00	1.2	16.60	0.5	19.20	0.3
11.50	0.0	14.10	1.2	16.70	0.5	19.30	0.3
11.60	0.0	14.20	1.2	16.80	0.5	19.40	0.3
11.70	0.0	14.30	1.2	16.90	0.5	19.50	0.3
11.80	0.0	14.40	1.1	17.00	0.5	19.60	0.3
11.90	0.0	14.50	1.0	17.10	0.5	19.70	0.3
12.00	0.0	14.60	1.0	17.20	0.5	19.80	0.3
12.10	0.0	14.70	1.0	17.30	0.5	19.90	0.3
12.20	0.0	14.80	1.0	17.40	0.5	20.00	0.3
12.30	0.0	14.90	1.0	17.50	0.5	20.10	0.3
12.40	6.1	15.00	0.9	17.60	0.4	20.20	0.3
12.50	9.2	15.10	0.9	17.70	0.4	20.30	0.3
12.60	9.0	15.20	0.8	17.80	0.4	20.40	0.3
12.70	7.7	15.30	0.8	17.90	0.4	20.50	0.3
12.80	6.1	15.40	0.8	18.00	0.4	20.60	0.3
12.90	4.8	15.50	0.8	18.10	0.4	20.70	0.3
13.00	3.6	15.60	0.8	18.20	0.4	20.80	0.3
13.10	2.8	15.70	0.7	18.30	0.4	20.90	0.3
13.20	2.3	15.80	0.7	18.40	0.4	21.00	0.3
13.30	2.0	15.90	0.7	18.50	0.4		
13.40	1.8	16.00	0.7	18.60	0.4		
13.50	1.7	16.10	0.7	18.70	0.3		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

WORKING CURVE
FOR POND NO.PONDB12

DT= 0.10 HRS

ELEV (FT)	DISC. (CFS)	S2 (AC FT)	S2 (CFS-HRS)	O2/2 (CFS)	S2/DT (CFS)	S2/DT+O2/2 (CFS)
28.00	0.0	0.00	0.0	0.0	0.0	0.0
29.00	2.3	0.06	0.7	1.2	7.0	8.2
30.00	4.6	0.15	1.8	2.3	18.0	20.3
31.00	6.1	0.25	3.0	3.1	30.0	33.1
32.00	7.3	0.39	4.7	3.7	47.0	50.7
33.00	8.3	0.54	6.5	4.2	65.0	69.2
34.00	9.1	0.72	8.7	4.6	87.0	91.6

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 2 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

POND ROUTING

HYDROGRAPH #AR25A
POND #PONDB12
STORM FREQUENCY: 25 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
11.00	0.0	0.0	0.0	0.0	28.00	0.00
11.10	0.0	0.0	0.0	0.0	28.00	0.00
11.20	0.0	0.0	0.0	0.0	28.00	0.00
11.30	0.0	0.0	0.0	0.0	28.00	0.00
11.40	0.0	0.0	0.0	0.0	28.00	0.00
11.50	0.0	0.0	0.0	0.0	28.00	0.00
11.60	0.0	0.0	0.0	0.0	28.00	0.00
11.70	0.0	0.0	0.0	0.0	28.00	0.00
11.80	0.0	0.0	0.0	0.0	28.00	0.00
11.90	0.0	0.0	0.0	0.0	28.00	0.00
12.00	0.0	0.0	0.0	0.0	28.00	0.00
12.10	0.0	0.0	0.0	0.0	28.00	0.00
12.20	0.0	0.0	0.0	0.0	28.00	0.00
12.30	0.0	0.0	0.0	0.0	28.00	0.00
12.40	6.1	3.1	3.1	0.9	28.38	0.02
12.50	9.2	7.7	9.9	2.6	29.14	0.07
12.60	9.0	9.1	16.4	3.9	29.68	0.12
12.70	7.7	8.4	20.9	4.7	30.05	0.15
12.80	6.1	6.9	23.1	4.9	30.22	0.17
12.90	4.8	5.5	23.7	5.0	30.27	0.18
13.00	3.6	4.2	22.9	4.9	30.20	0.17
13.10	2.8	3.2	21.2	4.7	30.07	0.16
13.20	2.3	2.6	19.1	4.4	29.90	0.14
13.30	2.0	2.2	16.9	4.0	29.72	0.12
13.40	1.8	1.9	14.8	3.6	29.55	0.11
13.50	1.7	1.8	13.0	3.2	29.40	0.09
13.60	1.6	1.7	11.5	2.9	29.27	0.08
13.70	1.4	1.5	10.1	2.7	29.16	0.07
13.80	1.4	1.4	8.8	2.4	29.05	0.06
13.90	1.3	1.3	7.7	2.2	28.94	0.05
14.00	1.2	1.3	6.8	1.9	28.83	0.05
14.10	1.2	1.2	6.1	1.7	28.74	0.04
14.20	1.2	1.2	5.6	1.6	28.68	0.04
14.30	1.2	1.2	5.2	1.5	28.63	0.04
14.40	1.1	1.2	4.9	1.4	28.60	0.03

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 3 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTING

HYDROGRAPH #AR25A
POND #PONDB12
STORM FREQUENCY: 25 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
14.60	1.0	1.0	4.3	1.2	28.52	0.03
14.70	1.0	1.0	4.1	1.2	28.50	0.03
14.80	1.0	1.0	3.9	1.1	28.48	0.03
14.90	1.0	1.0	3.8	1.1	28.46	0.03
15.00	0.9	1.0	3.7	1.0	28.45	0.03
15.10	0.9	0.9	3.6	1.0	28.44	0.03
15.20	0.8	0.9	3.5	1.0	28.43	0.02
15.30	0.8	0.8	3.3	0.9	28.40	0.02
15.40	0.8	0.8	3.2	0.9	28.39	0.02
15.50	0.8	0.8	3.1	0.9	28.38	0.02
15.60	0.8	0.8	3.0	0.8	28.37	0.02
15.70	0.7	0.8	3.0	0.8	28.37	0.02
15.80	0.7	0.7	2.9	0.8	28.35	0.02
15.90	0.7	0.7	2.8	0.8	28.34	0.02
16.00	0.7	0.7	2.7	0.8	28.33	0.02
16.10	0.7	0.7	2.6	0.7	28.32	0.02
16.20	0.6	0.7	2.6	0.7	28.32	0.02
16.30	0.6	0.6	2.5	0.7	28.30	0.02
16.40	0.6	0.6	2.4	0.7	28.29	0.02
16.50	0.6	0.6	2.3	0.6	28.28	0.02
16.60	0.5	0.6	2.3	0.6	28.28	0.02
16.70	0.5	0.5	2.2	0.6	28.27	0.02
16.80	0.5	0.5	2.1	0.6	28.26	0.01
16.90	0.5	0.5	2.0	0.6	28.24	0.01
17.00	0.5	0.5	1.9	0.5	28.23	0.01
17.10	0.5	0.5	1.9	0.5	28.23	0.01
17.20	0.5	0.5	1.9	0.5	28.23	0.01
17.30	0.5	0.5	1.9	0.5	28.23	0.01
17.40	0.5	0.5	1.9	0.5	28.23	0.01
17.50	0.5	0.5	1.9	0.5	28.23	0.01
17.60	0.4	0.5	1.9	0.5	28.23	0.01
17.70	0.4	0.4	1.8	0.5	28.22	0.01
17.80	0.4	0.4	1.7	0.5	28.21	0.01
17.90	0.4	0.4	1.6	0.4	28.20	0.01
18.00	0.4	0.4	1.6	0.4	28.20	0.01

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 4 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

POND ROUTING

HYDROGRAPH #AR25A
POND #PONDB12
STORM FREQUENCY: 25 YRS.

TIME (HRS)	INFLOW (CFS)	Avg	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
		INFLOW (CFS)				
18.20	0.4	0.4	1.6	0.4	28.20	0.01
18.30	0.4	0.4	1.6	0.4	28.20	0.01
18.40	0.4	0.4	1.6	0.4	28.20	0.01
18.50	0.4	0.4	1.6	0.4	28.20	0.01
18.60	0.4	0.4	1.6	0.4	28.20	0.01
18.70	0.3	0.4	1.6	0.4	28.20	0.01
18.80	0.3	0.3	1.5	0.4	28.18	0.01
18.90	0.3	0.3	1.4	0.4	28.17	0.01
19.00	0.3	0.3	1.3	0.4	28.16	0.01
19.10	0.3	0.3	1.2	0.3	28.15	0.01
19.20	0.3	0.3	1.2	0.3	28.15	0.01
19.30	0.3	0.3	1.2	0.3	28.15	0.01
19.40	0.3	0.3	1.2	0.3	28.15	0.01
19.50	0.3	0.3	1.2	0.3	28.15	0.01
19.60	0.3	0.3	1.2	0.3	28.15	0.01
19.70	0.3	0.3	1.2	0.3	28.15	0.01
19.80	0.3	0.3	1.2	0.3	28.15	0.01
19.90	0.3	0.3	1.2	0.3	28.15	0.01
20.00	0.3	0.3	1.2	0.3	28.15	0.01
20.10	0.3	0.3	1.2	0.3	28.15	0.01
20.20	0.3	0.3	1.2	0.3	28.15	0.01
20.30	0.3	0.3	1.2	0.3	28.15	0.01
20.40	0.3	0.3	1.2	0.3	28.15	0.01
20.50	0.3	0.3	1.2	0.3	28.15	0.01
20.60	0.3	0.3	1.2	0.3	28.15	0.01
20.70	0.3	0.3	1.2	0.3	28.15	0.01
20.80	0.3	0.3	1.2	0.3	28.15	0.01
20.90	0.3	0.3	1.2	0.3	28.15	0.01
21.00	0.3	0.3	1.2	0.3	28.15	0.01

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 5 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

HYDROGRAPH #AR25A
POND #PONDB12
STORM FREQUENCY: 25 YRS.

SUMMARY OF POND ROUTING RESULTS

PEAK INFLOW : 9.2 CFS @ T = 12.50 HRS.

PEAK DISCHARGE : 5.0 CFS @ T = 12.90 HRS.

PEAK STORAGE VOLUME : 0.18 AC.FT.

PEAK STORAGE ELEVATION : 30.27

FREEBOARD : 3.73 FT.

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 6 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

Hydrograph Name: AR25B

Storm Data

Drainage Area Data

Frequency :	25 Yrs.	Area:	4.6 Ac.	T.C.:	0.00 Hrs.
Rainfall :	6.50 In.	CN :	0	Ia/P:	0.00
Runoff :	0.00 In.	***** Hydrograph Status: Valid *****			

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.0	13.60	2.9	16.20	0.7	18.80	0.4
11.10	0.0	13.70	2.7	16.30	0.7	18.90	0.4
11.20	0.0	13.80	2.4	16.40	0.7	19.00	0.4
11.30	0.0	13.90	2.2	16.50	0.6	19.10	0.3
11.40	0.0	14.00	1.9	16.60	0.6	19.20	0.3
11.50	0.0	14.10	1.7	16.70	0.6	19.30	0.3
11.60	0.0	14.20	1.6	16.80	0.6	19.40	0.3
11.70	0.0	14.30	1.5	16.90	0.6	19.50	0.3
11.80	0.0	14.40	1.4	17.00	0.5	19.60	0.3
11.90	0.0	14.50	1.3	17.10	0.5	19.70	0.3
12.00	0.0	14.60	1.2	17.20	0.5	19.80	0.3
12.10	0.0	14.70	1.2	17.30	0.5	19.90	0.3
12.20	0.0	14.80	1.1	17.40	0.5	20.00	0.3
12.30	0.0	14.90	1.1	17.50	0.5	20.10	0.3
12.40	0.9	15.00	1.0	17.60	0.5	20.20	0.3
12.50	2.6	15.10	1.0	17.70	0.5	20.30	0.3
12.60	3.9	15.20	1.0	17.80	0.5	20.40	0.3
12.70	4.7	15.30	0.9	17.90	0.4	20.50	0.3
12.80	4.9	15.40	0.9	18.00	0.4	20.60	0.3
12.90	5.0	15.50	0.9	18.10	0.4	20.70	0.3
13.00	4.9	15.60	0.8	18.20	0.4	20.80	0.3
13.10	4.7	15.70	0.8	18.30	0.4	20.90	0.3
13.20	4.4	15.80	0.8	18.40	0.4	21.00	0.3
13.30	4.0	15.90	0.8	18.50	0.4		
13.40	3.6	16.00	0.8	18.60	0.4		
13.50	3.2	16.10	0.7	18.70	0.4		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB
CHECKED BY : CTB

Hydrograph Name: AEX50

Storm Data

Frequency : 50 Yrs.
Rainfall : 7.00 In.
Runoff : 2.12 In.

Drainage Area Data

Area: 4.6 Ac. T.C.: 0.30 Hrs.
CN : 55 Ia/P: 0.10
**** Hydrograph Status: Valid ****

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.4	13.60	1.0	16.20	0.4	18.80	0.2
11.10	0.4	13.70	0.9	16.30	0.4	18.90	0.2
11.20	0.4	13.80	0.9	16.40	0.4	19.00	0.2
11.30	0.5	13.90	0.8	16.50	0.4	19.10	0.2
11.40	0.5	14.00	0.8	16.60	0.4	19.20	0.2
11.50	0.6	14.10	0.8	16.70	0.3	19.30	0.2
11.60	0.7	14.20	0.8	16.80	0.3	19.40	0.2
11.70	0.9	14.30	0.7	16.90	0.3	19.50	0.2
11.80	1.1	14.40	0.7	17.00	0.3	19.60	0.2
11.90	1.3	14.50	0.7	17.10	0.3	19.70	0.2
12.00	1.9	14.60	0.7	17.20	0.3	19.80	0.2
12.10	2.7	14.70	0.7	17.30	0.3	19.90	0.2
12.20	4.3	14.80	0.6	17.40	0.3	20.00	0.2
12.30	6.7	14.90	0.6	17.50	0.3	20.10	0.2
12.40	7.5	15.00	0.6	17.60	0.3	20.20	0.2
12.50	6.8	15.10	0.6	17.70	0.3	20.30	0.2
12.60	5.4	15.20	0.6	17.80	0.3	20.40	0.2
12.70	4.2	15.30	0.5	17.90	0.3	20.50	0.2
12.80	3.1	15.40	0.5	18.00	0.3	20.60	0.2
12.90	2.4	15.50	0.5	18.10	0.3	20.70	0.2
13.00	1.8	15.60	0.5	18.20	0.2	20.80	0.2
13.10	1.6	15.70	0.5	18.30	0.2	20.90	0.2
13.20	1.3	15.80	0.5	18.40	0.2	21.00	0.2
13.30	1.2	15.90	0.5	18.50	0.2		
13.40	1.1	16.00	0.4	18.60	0.2		
13.50	1.0	16.10	0.4	18.70	0.2		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

Hydrograph Name: APR50

Storm Data

Drainage Area Data

Frequency :	50 Yrs.	Area:	4.6 Ac.	T.C.:	0.30 Hrs.
Rainfall :	7.00 In.	CN :	69	Ia/P:	0.10
Runoff :	3.52 In.	**** Hydrograph Status: Valid ****			

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.6	13.60	1.6	16.20	0.7	18.80	0.4
11.10	0.7	13.70	1.5	16.30	0.7	18.90	0.4
11.20	0.7	13.80	1.5	16.40	0.6	19.00	0.4
11.30	0.8	13.90	1.4	16.50	0.6	19.10	0.4
11.40	0.9	14.00	1.4	16.60	0.6	19.20	0.4
11.50	1.0	14.10	1.3	16.70	0.6	19.30	0.4
11.60	1.1	14.20	1.3	16.80	0.6	19.40	0.4
11.70	1.4	14.30	1.2	16.90	0.6	19.50	0.4
11.80	1.8	14.40	1.2	17.00	0.6	19.60	0.3
11.90	2.1	14.50	1.1	17.10	0.6	19.70	0.3
12.00	3.1	14.60	1.1	17.20	0.5	19.80	0.3
12.10	4.5	14.70	1.1	17.30	0.5	19.90	0.3
12.20	7.2	14.80	1.1	17.40	0.5	20.00	0.3
12.30	11.1	14.90	1.0	17.50	0.5	20.10	0.3
<u>12.40</u>	<u>12.5</u>	15.00	1.0	17.60	0.5	20.20	0.3
12.50	11.3	15.10	1.0	17.70	0.5	20.30	0.3
12.60	9.0	15.20	0.9	17.80	0.5	20.40	0.3
12.70	6.9	15.30	0.9	17.90	0.5	20.50	0.3
12.80	5.1	15.40	0.9	18.00	0.4	20.60	0.3
12.90	4.0	15.50	0.9	18.10	0.4	20.70	0.3
13.00	3.0	15.60	0.8	18.20	0.4	20.80	0.3
13.10	2.6	15.70	0.8	18.30	0.4	20.90	0.3
13.20	2.2	15.80	0.8	18.40	0.4	21.00	0.3
13.30	2.0	15.90	0.8	18.50	0.4		
13.40	1.8	16.00	0.7	18.60	0.4		
13.50	1.7	16.10	0.7	18.70	0.4		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

WORKING CURVE
FOR POND NO.PONDA18

DT= 0.10 HRS

STORAGE

ELEV (FT)	DISC. (CFS)	S2 (AC FT)	S2 (CFS-HRS)	O2/2 (CFS)	S2/DT (CFS)	S2/DT+O2/2 (CFS)
48.00	0.0	0.00	0.0	0.0	0.0	0.0
49.00	0.0	0.07	0.8	0.0	8.0	8.0
50.00	0.0	0.16	1.9	0.0	19.0	19.0
51.00	0.0	0.25	3.0	0.0	30.0	30.0
52.00	15.5	0.37	4.5	7.8	45.0	52.8

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 2 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTING

HYDROGRAPH #APR50
POND #PONDA18
STORM FREQUENCY: 50 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
11.00	0.6	0.3	0.3	0.0	48.04	0.00
11.10	0.7	0.7	1.0	0.0	48.13	0.01
11.20	0.7	0.7	1.7	0.0	48.21	0.01
11.30	0.8	0.8	2.5	0.0	48.31	0.02
11.40	0.9	0.9	3.4	0.0	48.43	0.03
11.50	1.0	1.0	4.4	0.0	48.55	0.04
11.60	1.1	1.1	5.5	0.0	48.69	0.05
11.70	1.4	1.3	6.8	0.0	48.85	0.06
11.80	1.8	1.6	8.4	0.0	49.04	0.07
11.90	2.1	2.0	10.4	0.0	49.22	0.09
12.00	3.1	2.6	13.0	0.0	49.45	0.11
12.10	4.5	3.8	16.8	0.0	49.80	0.14
12.20	7.2	5.9	22.7	0.0	50.34	0.19
12.30	11.1	9.2	31.9	1.3	51.08	0.26
12.40	12.5	11.8	42.4	8.4	51.54	0.32
12.50	11.3	11.9	45.9	10.8	51.70	0.33
12.60	9.0	10.2	45.3	10.4	51.67	0.33
12.70	6.9	8.0	42.9	8.8	51.57	0.32
12.80	5.1	6.0	40.1	6.9	51.44	0.30
12.90	4.0	4.6	37.8	5.3	51.34	0.29
13.00	3.0	3.5	36.0	4.1	51.26	0.28
13.10	2.6	2.8	34.7	3.2	51.21	0.27
13.20	2.2	2.4	33.9	2.7	51.17	0.27
13.30	2.0	2.1	33.3	2.2	51.14	0.27
13.40	1.8	1.9	33.0	2.0	51.13	0.26
13.50	1.7	1.8	32.8	1.9	51.12	0.26
13.60	1.6	1.7	32.6	1.8	51.11	0.26
13.70	1.5	1.6	32.4	1.6	51.11	0.26
13.80	1.5	1.5	32.3	1.6	51.10	0.26
13.90	1.4	1.5	32.2	1.5	51.10	0.26
14.00	1.4	1.4	32.1	1.4	51.09	0.26
14.10	1.3	1.3	32.0	1.4	51.09	0.26
14.20	1.3	1.3	31.9	1.3	51.08	0.26
14.30	1.2	1.3	31.9	1.3	51.08	0.26
14.40	1.2	1.2	31.8	1.2	51.08	0.26

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 3 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTING

HYDROGRAPH #APR50
POND #PONDA18
STORM FREQUENCY: 50 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
14.60	1.1	1.1	31.7	1.2	51.07	0.26
14.70	1.1	1.1	31.6	1.1	51.07	0.26
14.80	1.1	1.1	31.6	1.1	51.07	0.26
14.90	1.0	1.1	31.6	1.1	51.07	0.26
15.00	1.0	1.0	31.5	1.0	51.07	0.26
15.10	1.0	1.0	31.5	1.0	51.07	0.26
15.20	0.9	1.0	31.5	1.0	51.07	0.26
15.30	0.9	0.9	31.4	1.0	51.06	0.26
15.40	0.9	0.9	31.3	0.9	51.06	0.25
15.50	0.9	0.9	31.3	0.9	51.06	0.25
15.60	0.8	0.9	31.3	0.9	51.06	0.25
15.70	0.8	0.8	31.2	0.8	51.05	0.25
15.80	0.8	0.8	31.2	0.8	51.05	0.25
15.90	0.8	0.8	31.2	0.8	51.05	0.25
16.00	0.7	0.8	31.2	0.8	51.05	0.25
16.10	0.7	0.7	31.1	0.7	51.05	0.25
16.20	0.7	0.7	31.1	0.7	51.05	0.25
16.30	0.7	0.7	31.1	0.7	51.05	0.25
16.40	0.6	0.7	31.1	0.7	51.05	0.25
16.50	0.6	0.6	31.0	0.7	51.04	0.25
16.60	0.6	0.6	30.9	0.6	51.04	0.25
16.70	0.6	0.6	30.9	0.6	51.04	0.25
16.80	0.6	0.6	30.9	0.6	51.04	0.25
16.90	0.6	0.6	30.9	0.6	51.04	0.25
17.00	0.6	0.6	30.9	0.6	51.04	0.25
17.10	0.6	0.6	30.9	0.6	51.04	0.25
17.20	0.5	0.6	30.9	0.6	51.04	0.25
17.30	0.5	0.5	30.8	0.5	51.04	0.25
17.40	0.5	0.5	30.8	0.5	51.04	0.25
17.50	0.5	0.5	30.8	0.5	51.04	0.25
17.60	0.5	0.5	30.8	0.5	51.04	0.25
17.70	0.5	0.5	30.8	0.5	51.04	0.25
17.80	0.5	0.5	30.8	0.5	51.04	0.25
17.90	0.5	0.5	30.8	0.5	51.04	0.25
18.00	0.4	0.5	30.8	0.5	51.04	0.25

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 4 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTING

HYDROGRAPH #APR50
 POND #PONDA18
 STORM FREQUENCY: 50 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
18.20	0.4	0.4	30.6	0.4	51.03	0.25
18.30	0.4	0.4	30.6	0.4	51.03	0.25
18.40	0.4	0.4	30.6	0.4	51.03	0.25
18.50	0.4	0.4	30.6	0.4	51.03	0.25
18.60	0.4	0.4	30.6	0.4	51.03	0.25
18.70	0.4	0.4	30.6	0.4	51.03	0.25
18.80	0.4	0.4	30.6	0.4	51.03	0.25
18.90	0.4	0.4	30.6	0.4	51.03	0.25
19.00	0.4	0.4	30.6	0.4	51.03	0.25
19.10	0.4	0.4	30.6	0.4	51.03	0.25
19.20	0.4	0.4	30.6	0.4	51.03	0.25
19.30	0.4	0.4	30.6	0.4	51.03	0.25
19.40	0.4	0.4	30.6	0.4	51.03	0.25
19.50	0.4	0.4	30.6	0.4	51.03	0.25
19.60	0.3	0.4	30.6	0.4	51.03	0.25
19.70	0.3	0.3	30.5	0.3	51.02	0.25
19.80	0.3	0.3	30.5	0.3	51.02	0.25
19.90	0.3	0.3	30.5	0.3	51.02	0.25
20.00	0.3	0.3	30.5	0.3	51.02	0.25
20.10	0.3	0.3	30.5	0.3	51.02	0.25
20.20	0.3	0.3	30.5	0.3	51.02	0.25
20.30	0.3	0.3	30.5	0.3	51.02	0.25
20.40	0.3	0.3	30.5	0.3	51.02	0.25
20.50	0.3	0.3	30.5	0.3	51.02	0.25
20.60	0.3	0.3	30.5	0.3	51.02	0.25
20.70	0.3	0.3	30.5	0.3	51.02	0.25
20.80	0.3	0.3	30.5	0.3	51.02	0.25
20.90	0.3	0.3	30.5	0.3	51.02	0.25
21.00	0.3	0.3	30.5	0.3	51.02	0.25

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 5 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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HYDROGRAPH #APR50
POND #PONDA18
STORM FREQUENCY: 50 YRS.

SUMMARY OF POND ROUTING RESULTS

PEAK INFLOW : 12.5 CFS @ T = 12.40 HRS.

PEAK DISCHARGE : 10.8 CFS @ T = 12.50 HRS.

PEAK STORAGE VOLUME : 0.33 AC.FT.

PEAK STORAGE ELEVATION : 51.70

FREEBOARD : 0.30 FT.

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 6 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

Hydrograph Name: AR50A

Storm Data

Drainage Area Data

Frequency :	50 Yrs.	Area:	4.6 Ac.	T.C.:	0.00 Hrs.
Rainfall :	7.00 In.	CN :	0	Ia/P:	0.00
Runoff :	0.00 In.	**** Hydrograph Status: Valid ****			

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.0	13.60	1.8	16.20	0.7	18.80	0.4
11.10	0.0	13.70	1.6	16.30	0.7	18.90	0.4
11.20	0.0	13.80	1.6	16.40	0.7	19.00	0.4
11.30	0.0	13.90	1.5	16.50	0.7	19.10	0.4
11.40	0.0	14.00	1.4	16.60	0.6	19.20	0.4
11.50	0.0	14.10	1.4	16.70	0.6	19.30	0.4
11.60	0.0	14.20	1.3	16.80	0.6	19.40	0.4
11.70	0.0	14.30	1.3	16.90	0.6	19.50	0.4
11.80	0.0	14.40	1.2	17.00	0.6	19.60	0.4
11.90	0.0	14.50	1.2	17.10	0.6	19.70	0.3
12.00	0.0	14.60	1.2	17.20	0.6	19.80	0.3
12.10	0.0	14.70	1.1	17.30	0.5	19.90	0.3
12.20	0.0	14.80	1.1	17.40	0.5	20.00	0.3
12.30	1.3	14.90	1.1	17.50	0.5	20.10	0.3
12.40	8.4	15.00	1.0	17.60	0.5	20.20	0.3
12.50	10.8	15.10	1.0	17.70	0.5	20.30	0.3
12.60	10.4	15.20	1.0	17.80	0.5	20.40	0.3
12.70	8.8	15.30	1.0	17.90	0.5	20.50	0.3
12.80	6.9	15.40	0.9	18.00	0.5	20.60	0.3
12.90	5.3	15.50	0.9	18.10	0.5	20.70	0.3
13.00	4.1	15.60	0.9	18.20	0.4	20.80	0.3
13.10	3.2	15.70	0.8	18.30	0.4	20.90	0.3
13.20	2.7	15.80	0.8	18.40	0.4	21.00	0.3
13.30	2.2	15.90	0.8	18.50	0.4		
13.40	2.0	16.00	0.8	18.60	0.4		
13.50	1.9	16.10	0.7	18.70	0.4		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

WORKING CURVE
FOR POND NO.PONDB12

DT= 0.10 HRS

ELEV (FT)	DISC. (CFS)	S2 (AC FT)	S2 (CFS-HRS)	O2/2 (CFS)	S2/DT (CFS)	S2/DT+O2/2 (CFS)
28.00	0.0	0.00	0.0	0.0	0.0	0.0
29.00	2.3	0.06	0.7	1.2	7.0	8.2
30.00	4.6	0.15	1.8	2.3	18.0	20.3
31.00	6.1	0.25	3.0	3.1	30.0	33.1
32.00	7.3	0.39	4.7	3.7	47.0	50.7
33.00	8.3	0.54	6.5	4.2	65.0	69.2
34.00	9.1	0.72	8.7	4.6	87.0	91.6

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 2 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTING

HYDROGRAPH #AR50A
POND #PONDB12
STORM FREQUENCY: 50 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
11.00	0.0	0.0	0.0	0.0	28.00	0.00
11.10	0.0	0.0	0.0	0.0	28.00	0.00
11.20	0.0	0.0	0.0	0.0	28.00	0.00
11.30	0.0	0.0	0.0	0.0	28.00	0.00
11.40	0.0	0.0	0.0	0.0	28.00	0.00
11.50	0.0	0.0	0.0	0.0	28.00	0.00
11.60	0.0	0.0	0.0	0.0	28.00	0.00
11.70	0.0	0.0	0.0	0.0	28.00	0.00
11.80	0.0	0.0	0.0	0.0	28.00	0.00
11.90	0.0	0.0	0.0	0.0	28.00	0.00
12.00	0.0	0.0	0.0	0.0	28.00	0.00
12.10	0.0	0.0	0.0	0.0	28.00	0.00
12.20	0.0	0.0	0.0	0.0	28.00	0.00
12.30	1.3	0.7	0.7	0.2	28.09	0.00
12.40	8.4	4.9	5.4	1.5	28.66	0.04
12.50	10.8	9.6	13.5	3.3	29.44	0.10
12.60	10.4	10.6	20.8	4.7	30.04	0.15
12.70	8.8	9.6	25.7	5.2	30.42	0.19
12.80	6.9	7.9	28.4	5.5	30.63	0.21
12.90	5.3	6.1	29.0	5.6	30.68	0.22
13.00	4.1	4.7	28.1	5.5	30.61	0.21
13.10	3.2	3.7	26.3	5.3	30.47	0.20
13.20	2.7	3.0	24.0	5.0	30.29	0.18
13.30	2.2	2.5	21.5	4.7	30.09	0.16
13.40	2.0	2.1	18.9	4.3	29.88	0.14
13.50	1.9	2.0	16.6	3.9	29.69	0.12
13.60	1.8	1.9	14.6	3.5	29.53	0.11
13.70	1.6	1.7	12.8	3.2	29.38	0.09
13.80	1.6	1.6	11.2	2.9	29.25	0.08
13.90	1.5	1.6	9.9	2.6	29.14	0.07
14.00	1.4	1.5	8.8	2.4	29.05	0.06
14.10	1.4	1.4	7.8	2.2	28.95	0.06
14.20	1.3	1.3	6.9	1.9	28.84	0.05
14.30	1.3	1.3	6.3	1.8	28.77	0.04
14.40	1.2	1.3	5.8	1.6	28.71	0.04

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 3 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

POND ROUTING

HYDROGRAPH #AR50A
POND #PONDB12
STORM FREQUENCY: 50 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
14.60	1.2	1.2	5.1	1.4	28.62	0.04
14.70	1.1	1.2	4.9	1.4	28.60	0.03
14.80	1.1	1.1	4.6	1.3	28.56	0.03
14.90	1.1	1.1	4.4	1.2	28.54	0.03
15.00	1.0	1.1	4.3	1.2	28.52	0.03
15.10	1.0	1.0	4.1	1.1	28.50	0.03
15.20	1.0	1.0	4.0	1.1	28.49	0.03
15.30	1.0	1.0	3.9	1.1	28.48	0.03
15.40	0.9	1.0	3.8	1.1	28.46	0.03
15.50	0.9	0.9	3.6	1.0	28.44	0.03
15.60	0.9	0.9	3.5	1.0	28.43	0.02
15.70	0.8	0.9	3.4	1.0	28.41	0.02
15.80	0.8	0.8	3.2	0.9	28.39	0.02
15.90	0.8	0.8	3.1	0.9	28.38	0.02
16.00	0.8	0.8	3.0	0.8	28.37	0.02
16.10	0.7	0.8	3.0	0.8	28.37	0.02
16.20	0.7	0.7	2.9	0.8	28.35	0.02
16.30	0.7	0.7	2.8	0.8	28.34	0.02
16.40	0.7	0.7	2.7	0.8	28.33	0.02
16.50	0.7	0.7	2.6	0.7	28.32	0.02
16.60	0.6	0.7	2.6	0.7	28.32	0.02
16.70	0.6	0.6	2.5	0.7	28.30	0.02
16.80	0.6	0.6	2.4	0.7	28.29	0.02
16.90	0.6	0.6	2.3	0.6	28.28	0.02
17.00	0.6	0.6	2.3	0.6	28.28	0.02
17.10	0.6	0.6	2.3	0.6	28.28	0.02
17.20	0.6	0.6	2.3	0.6	28.28	0.02
17.30	0.5	0.6	2.3	0.6	28.28	0.02
17.40	0.5	0.5	2.2	0.6	28.27	0.02
17.50	0.5	0.5	2.1	0.6	28.26	0.01
17.60	0.5	0.5	2.0	0.6	28.24	0.01
17.70	0.5	0.5	1.9	0.5	28.23	0.01
17.80	0.5	0.5	1.9	0.5	28.23	0.01
17.90	0.5	0.5	1.9	0.5	28.23	0.01
18.00	0.5	0.5	1.9	0.5	28.23	0.01

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 4 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTINGHYDROGRAPH #AR50A
POND #PONDB12
STORM FREQUENCY: 50 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
18.20	0.4	0.5	1.9	0.5	28.23	0.01
18.30	0.4	0.4	1.8	0.5	28.22	0.01
18.40	0.4	0.4	1.7	0.5	28.21	0.01
18.50	0.4	0.4	1.6	0.4	28.20	0.01
18.60	0.4	0.4	1.6	0.4	28.20	0.01
18.70	0.4	0.4	1.6	0.4	28.20	0.01
18.80	0.4	0.4	1.6	0.4	28.20	0.01
18.90	0.4	0.4	1.6	0.4	28.20	0.01
19.00	0.4	0.4	1.6	0.4	28.20	0.01
19.10	0.4	0.4	1.6	0.4	28.20	0.01
19.20	0.4	0.4	1.6	0.4	28.20	0.01
19.30	0.4	0.4	1.6	0.4	28.20	0.01
19.40	0.4	0.4	1.6	0.4	28.20	0.01
19.50	0.4	0.4	1.6	0.4	28.20	0.01
19.60	0.4	0.4	1.6	0.4	28.20	0.01
19.70	0.3	0.4	1.6	0.4	28.20	0.01
19.80	0.3	0.3	1.5	0.4	28.18	0.01
19.90	0.3	0.3	1.4	0.4	28.17	0.01
20.00	0.3	0.3	1.3	0.4	28.16	0.01
20.10	0.3	0.3	1.2	0.3	28.15	0.01
20.20	0.3	0.3	1.2	0.3	28.15	0.01
20.30	0.3	0.3	1.2	0.3	28.15	0.01
20.40	0.3	0.3	1.2	0.3	28.15	0.01
20.50	0.3	0.3	1.2	0.3	28.15	0.01
20.60	0.3	0.3	1.2	0.3	28.15	0.01
20.70	0.3	0.3	1.2	0.3	28.15	0.01
20.80	0.3	0.3	1.2	0.3	28.15	0.01
20.90	0.3	0.3	1.2	0.3	28.15	0.01
21.00	0.3	0.3	1.2	0.3	28.15	0.01

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 5 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

HYDROGRAPH #AR50A
POND #PONDB12
STORM FREQUENCY: 50 YRS.

SUMMARY OF POND ROUTING RESULTS

PEAK INFLOW : 10.8 CFS @ T = 12.50 HRS.

PEAK DISCHARGE : 5.6 CFS @ T = 12.90 HRS.

PEAK STORAGE VOLUME : 0.22 AC.FT.

PEAK STORAGE ELEVATION : 30.68

FREEBOARD : 3.32 FT.

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 6 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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Hydrograph Name: AR50B

Storm Data

Drainage Area Data

Frequency : 50 Yrs.
 Rainfall : 7.00 In.
 Runoff : 0.00 In.

Area: 4.6 Ac. T.C.: 0.00 Hrs.
 CN : 0 Ia/P: 0.00
 **** Hydrograph Status: Valid ****

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.0	13.60	3.5	16.20	0.8	18.80	0.4
11.10	0.0	13.70	3.2	16.30	0.8	18.90	0.4
11.20	0.0	13.80	2.9	16.40	0.8	19.00	0.4
11.30	0.0	13.90	2.6	16.50	0.7	19.10	0.4
11.40	0.0	14.00	2.4	16.60	0.7	19.20	0.4
11.50	0.0	14.10	2.2	16.70	0.7	19.30	0.4
11.60	0.0	14.20	1.9	16.80	0.7	19.40	0.4
11.70	0.0	14.30	1.8	16.90	0.6	19.50	0.4
11.80	0.0	14.40	1.6	17.00	0.6	19.60	0.4
11.90	0.0	14.50	1.5	17.10	0.6	19.70	0.4
12.00	0.0	14.60	1.4	17.20	0.6	19.80	0.4
12.10	0.0	14.70	1.4	17.30	0.6	19.90	0.4
12.20	0.0	14.80	1.3	17.40	0.6	20.00	0.4
12.30	0.2	14.90	1.2	17.50	0.6	20.10	0.3
12.40	1.5	15.00	1.2	17.60	0.6	20.20	0.3
12.50	3.3	15.10	1.1	17.70	0.5	20.30	0.3
12.60	4.7	15.20	1.1	17.80	0.5	20.40	0.3
12.70	5.2	15.30	1.1	17.90	0.5	20.50	0.3
12.80	5.5	15.40	1.1	18.00	0.5	20.60	0.3
12.90	5.6	15.50	1.0	18.10	0.5	20.70	0.3
13.00	5.5	15.60	1.0	18.20	0.5	20.80	0.3
13.10	5.3	15.70	1.0	18.30	0.5	20.90	0.3
13.20	5.0	15.80	0.9	18.40	0.5	21.00	0.3
13.30	4.7	15.90	0.9	18.50	0.4		
13.40	4.3	16.00	0.8	18.60	0.4		
13.50	3.9	16.10	0.8	18.70	0.4		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

Hydrograph Name: AEX100

Storm Data

Drainage Area Data

Frequency :	100 Yrs.	Area:	4.6 Ac.	T.C.:	0.30 Hrs.
Rainfall :	7.80 In.	CN :	55	Ia/P:	0.10
Runoff :	2.65 In.	***** Hydrograph Status: Valid *****			

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.5	13.60	1.2	16.20	0.5	18.80	0.3
11.10	0.5	13.70	1.2	16.30	0.5	18.90	0.3
11.20	0.5	13.80	1.1	16.40	0.5	19.00	0.3
11.30	0.6	13.90	1.1	16.50	0.5	19.10	0.3
11.40	0.7	14.00	1.0	16.60	0.5	19.20	0.3
11.50	0.8	14.10	1.0	16.70	0.4	19.30	0.3
11.60	0.8	14.20	0.9	16.80	0.4	19.40	0.3
11.70	1.1	14.30	0.9	16.90	0.4	19.50	0.3
11.80	1.3	14.40	0.9	17.00	0.4	19.60	0.2
11.90	1.6	14.50	0.9	17.10	0.4	19.70	0.2
12.00	2.3	14.60	0.8	17.20	0.4	19.80	0.2
12.10	3.4	14.70	0.8	17.30	0.4	19.90	0.2
12.20	5.4	14.80	0.8	17.40	0.4	20.00	0.2
12.30	8.3	14.90	0.8	17.50	0.4	20.10	0.2
12.40	9.4	15.00	0.7	17.60	0.4	20.20	0.2
12.50	8.5	15.10	0.7	17.70	0.4	20.30	0.2
12.60	6.8	15.20	0.7	17.80	0.3	20.40	0.2
12.70	5.2	15.30	0.7	17.90	0.3	20.50	0.2
12.80	3.9	15.40	0.7	18.00	0.3	20.60	0.2
12.90	3.0	15.50	0.6	18.10	0.3	20.70	0.2
13.00	2.2	15.60	0.6	18.20	0.3	20.80	0.2
13.10	1.9	15.70	0.6	18.30	0.3	20.90	0.2
13.20	1.6	15.80	0.6	18.40	0.3	21.00	0.2
13.30	1.5	15.90	0.6	18.50	0.3		
13.40	1.3	16.00	0.5	18.60	0.3		
13.50	1.3	16.10	0.5	18.70	0.3		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

Hydrograph Name: APR100

Storm Data

Drainage Area Data

Frequency :	100 Yrs.	Area:	4.6 Ac.	T.C.:	0.30 Hrs.
Rainfall :	7.80 In.	CN :	69	Ia/P:	0.10
Runoff :	4.18 In.	**** Hydrograph Status: Valid ****			

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.7	13.60	1.9	16.20	0.8	18.80	0.4
11.10	0.8	13.70	1.8	16.30	0.8	18.90	0.4
11.20	0.9	13.80	1.7	16.40	0.7	19.00	0.4
11.30	0.9	13.90	1.7	16.50	0.7	19.10	0.4
11.40	1.0	14.00	1.6	16.60	0.7	19.20	0.4
11.50	1.2	14.10	1.6	16.70	0.7	19.30	0.4
11.60	1.3	14.20	1.5	16.80	0.7	19.40	0.4
11.70	1.7	14.30	1.4	16.90	0.7	19.50	0.4
11.80	2.1	14.40	1.4	17.00	0.7	19.60	0.4
11.90	2.5	14.50	1.3	17.10	0.7	19.70	0.4
12.00	3.7	14.60	1.3	17.20	0.6	19.80	0.4
12.10	5.4	14.70	1.3	17.30	0.6	19.90	0.4
12.20	8.6	14.80	1.3	17.40	0.6	20.00	0.4
12.30	13.2	14.90	1.2	17.50	0.6	20.10	0.4
<u>12.40</u>	<u>14.9</u>	15.00	1.2	17.60	0.6	20.20	0.4
12.50	13.5	15.10	1.1	17.70	0.6	20.30	0.4
12.60	10.7	15.20	1.1	17.80	0.5	20.40	0.4
12.70	8.2	15.30	1.1	17.90	0.5	20.50	0.4
12.80	6.1	15.40	1.0	18.00	0.5	20.60	0.4
12.90	4.8	15.50	1.0	18.10	0.5	20.70	0.4
13.00	3.5	15.60	1.0	18.20	0.5	20.80	0.4
13.10	3.1	15.70	1.0	18.30	0.5	20.90	0.4
13.20	2.6	15.80	0.9	18.40	0.5	21.00	0.4
13.30	2.4	15.90	0.9	18.50	0.5		
13.40	2.1	16.00	0.9	18.60	0.4		
13.50	2.0	16.10	0.8	18.70	0.4		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

WORKING CURVE
FOR POND NO.PONDA18

DT= 0.10 HRS

ELEV (FT)	DISC. (CFS)	S2 (AC FT)	S2 (CFS-HRS)	O2/2 (CFS)	S2/DT (CFS)	S2/DT+O2/2 (CFS)
48.00	0.0	0.00	0.0	0.0	0.0	0.0
49.00	0.0	0.07	0.8	0.0	8.0	8.0
50.00	0.0	0.16	1.9	0.0	19.0	19.0
51.00	0.0	0.25	3.0	0.0	30.0	30.0
52.00	15.5	0.37	4.5	7.8	45.0	52.8

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 2 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

POND ROUTING

HYDROGRAPH #APR100
 POND #PONDA18
 STORM FREQUENCY: 100 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
11.00	0.7	0.4	0.4	0.0	48.05	0.00
11.10	0.8	0.8	1.2	0.0	48.15	0.01
11.20	0.9	0.9	2.1	0.0	48.26	0.02
11.30	0.9	0.9	3.0	0.0	48.38	0.02
11.40	1.0	1.0	4.0	0.0	48.50	0.03
11.50	1.2	1.1	5.1	0.0	48.64	0.04
11.60	1.3	1.3	6.4	0.0	48.80	0.05
11.70	1.7	1.5	7.9	0.0	48.99	0.07
11.80	2.1	1.9	9.8	0.0	49.16	0.08
11.90	2.5	2.3	12.1	0.0	49.37	0.10
12.00	3.7	3.1	15.2	0.0	49.65	0.13
12.10	5.4	4.6	19.8	0.0	50.07	0.16
12.20	8.6	7.0	26.8	0.0	50.71	0.22
12.30	13.2	10.9	37.7	5.2	51.34	0.29
12.40	14.9	14.1	46.6	11.3	51.73	0.34
12.50	13.5	14.2	49.5	13.3	51.86	0.35
12.60	10.7	12.1	48.3	12.4	51.80	0.35
12.70	8.2	9.5	45.4	10.5	51.68	0.33
12.80	6.1	7.2	42.1	8.2	51.53	0.31
12.90	4.8	5.5	39.4	6.4	51.41	0.30
13.00	3.5	4.2	37.2	4.9	51.32	0.29
13.10	3.1	3.3	35.6	3.8	51.25	0.28
13.20	2.6	2.9	34.7	3.2	51.21	0.27
13.30	2.4	2.5	34.0	2.7	51.18	0.27
13.40	2.1	2.3	33.6	2.4	51.16	0.27
13.50	2.0	2.1	33.3	2.2	51.14	0.27
13.60	1.9	2.0	33.1	2.1	51.14	0.26
13.70	1.8	1.9	32.9	2.0	51.13	0.26
13.80	1.7	1.8	32.7	1.8	51.12	0.26
13.90	1.7	1.7	32.6	1.8	51.11	0.26
14.00	1.6	1.7	32.5	1.7	51.11	0.26
14.10	1.6	1.6	32.4	1.6	51.11	0.26
14.20	1.5	1.6	32.4	1.6	51.11	0.26
14.30	1.4	1.5	32.3	1.6	51.10	0.26
14.40	1.4	1.4	32.1	1.4	51.09	0.26

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 3 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTING

HYDROGRAPH #APR100

POND #PONDA18

STORM FREQUENCY: 100 YRS.

TIME (HRS)	INFLOW (CFS)	Avg	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
		INFLOW (CFS)				
14.60	1.3	1.3	31.9	1.3	51.08	0.26
14.70	1.3	1.3	31.9	1.3	51.08	0.26
14.80	1.3	1.3	31.9	1.3	51.08	0.26
14.90	1.2	1.3	31.9	1.3	51.08	0.26
15.00	1.2	1.2	31.8	1.2	51.08	0.26
15.10	1.1	1.2	31.8	1.2	51.08	0.26
15.20	1.1	1.1	31.7	1.2	51.07	0.26
15.30	1.1	1.1	31.6	1.1	51.07	0.26
15.40	1.0	1.1	31.6	1.1	51.07	0.26
15.50	1.0	1.0	31.5	1.0	51.07	0.26
15.60	1.0	1.0	31.5	1.0	51.07	0.26
15.70	1.0	1.0	31.5	1.0	51.07	0.26
15.80	0.9	1.0	31.5	1.0	51.07	0.26
15.90	0.9	0.9	31.4	1.0	51.06	0.26
16.00	0.9	0.9	31.3	0.9	51.06	0.25
16.10	0.8	0.9	31.3	0.9	51.06	0.25
16.20	0.8	0.8	31.2	0.8	51.05	0.25
16.30	0.8	0.8	31.2	0.8	51.05	0.25
16.40	0.7	0.8	31.2	0.8	51.05	0.25
16.50	0.7	0.7	31.1	0.7	51.05	0.25
16.60	0.7	0.7	31.1	0.7	51.05	0.25
16.70	0.7	0.7	31.1	0.7	51.05	0.25
16.80	0.7	0.7	31.1	0.7	51.05	0.25
16.90	0.7	0.7	31.1	0.7	51.05	0.25
17.00	0.7	0.7	31.1	0.7	51.05	0.25
17.10	0.7	0.7	31.1	0.7	51.05	0.25
17.20	0.6	0.7	31.1	0.7	51.05	0.25
17.30	0.6	0.6	31.0	0.7	51.04	0.25
17.40	0.6	0.6	30.9	0.6	51.04	0.25
17.50	0.6	0.6	30.9	0.6	51.04	0.25
17.60	0.6	0.6	30.9	0.6	51.04	0.25
17.70	0.6	0.6	30.9	0.6	51.04	0.25
17.80	0.5	0.6	30.9	0.6	51.04	0.25
17.90	0.5	0.5	30.8	0.5	51.04	0.25
18.00	0.5	0.5	30.8	0.5	51.04	0.25

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 4 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTING

HYDROGRAPH #APR100
 POND #PONDA18
 STORM FREQUENCY: 100 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
18.20	0.5	0.5	30.8	0.5	51.04	0.25
18.30	0.5	0.5	30.8	0.5	51.04	0.25
18.40	0.5	0.5	30.8	0.5	51.04	0.25
18.50	0.5	0.5	30.8	0.5	51.04	0.25
18.60	0.4	0.5	30.8	0.5	51.04	0.25
18.70	0.4	0.4	30.7	0.5	51.03	0.25
18.80	0.4	0.4	30.6	0.4	51.03	0.25
18.90	0.4	0.4	30.6	0.4	51.03	0.25
19.00	0.4	0.4	30.6	0.4	51.03	0.25
19.10	0.4	0.4	30.6	0.4	51.03	0.25
19.20	0.4	0.4	30.6	0.4	51.03	0.25
19.30	0.4	0.4	30.6	0.4	51.03	0.25
19.40	0.4	0.4	30.6	0.4	51.03	0.25
19.50	0.4	0.4	30.6	0.4	51.03	0.25
19.60	0.4	0.4	30.6	0.4	51.03	0.25
19.70	0.4	0.4	30.6	0.4	51.03	0.25
19.80	0.4	0.4	30.6	0.4	51.03	0.25
19.90	0.4	0.4	30.6	0.4	51.03	0.25
20.00	0.4	0.4	30.6	0.4	51.03	0.25
20.10	0.4	0.4	30.6	0.4	51.03	0.25
20.20	0.4	0.4	30.6	0.4	51.03	0.25
20.30	0.4	0.4	30.6	0.4	51.03	0.25
20.40	0.4	0.4	30.6	0.4	51.03	0.25
20.50	0.4	0.4	30.6	0.4	51.03	0.25
20.60	0.4	0.4	30.6	0.4	51.03	0.25
20.70	0.4	0.4	30.6	0.4	51.03	0.25
20.80	0.4	0.4	30.6	0.4	51.03	0.25
20.90	0.4	0.4	30.6	0.4	51.03	0.25
21.00	0.4	0.4	30.6	0.4	51.03	0.25

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 5 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

HYDROGRAPH #APR100

POND #PONDA18

STORM FREQUENCY: 100 YRS.

SUMMARY OF POND ROUTING RESULTS

PEAK INFLOW : 14.9 CFS @ T = 12.40 HRS.

PEAK DISCHARGE : 13.3 CFS @ T = 12.50 HRS.

PEAK STORAGE VOLUME : 0.35 AC.FT.

PEAK STORAGE ELEVATION : 51.86

FREEBOARD : 0.14 FT.

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-21-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 6 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

Hydrograph Name: AR100A

Storm Data

Drainage Area Data

Frequency :	100 Yrs.	Area:	4.6 Ac.	T.C.:	0.00 Hrs.
Rainfall :	7.80 In.	CN :	0	Ia/P:	0.00
Runoff :	0.00 In.	**** Hydrograph Status: Valid ****			

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.0	13.60	2.1	16.20	0.8	18.80	0.4
11.10	0.0	13.70	2.0	16.30	0.8	18.90	0.4
11.20	0.0	13.80	1.8	16.40	0.8	19.00	0.4
11.30	0.0	13.90	1.8	16.50	0.7	19.10	0.4
11.40	0.0	14.00	1.7	16.60	0.7	19.20	0.4
11.50	0.0	14.10	1.6	16.70	0.7	19.30	0.4
11.60	0.0	14.20	1.6	16.80	0.7	19.40	0.4
11.70	0.0	14.30	1.6	16.90	0.7	19.50	0.4
11.80	0.0	14.40	1.4	17.00	0.7	19.60	0.4
11.90	0.0	14.50	1.4	17.10	0.7	19.70	0.4
12.00	0.0	14.60	1.3	17.20	0.7	19.80	0.4
12.10	0.0	14.70	1.3	17.30	0.7	19.90	0.4
12.20	0.0	14.80	1.3	17.40	0.6	20.00	0.4
12.30	5.2	14.90	1.3	17.50	0.6	20.10	0.4
12.40	11.3	15.00	1.2	17.60	0.6	20.20	0.4
<u>12.50</u>	<u>13.3</u>	15.10	1.2	17.70	0.6	20.30	0.4
12.60	12.4	15.20	1.2	17.80	0.6	20.40	0.4
12.70	10.5	15.30	1.1	17.90	0.5	20.50	0.4
12.80	8.2	15.40	1.1	18.00	0.5	20.60	0.4
12.90	6.4	15.50	1.0	18.10	0.5	20.70	0.4
13.00	4.9	15.60	1.0	18.20	0.5	20.80	0.4
13.10	3.8	15.70	1.0	18.30	0.5	20.90	0.4
13.20	3.2	15.80	1.0	18.40	0.5	21.00	0.4
13.30	2.7	15.90	1.0	18.50	0.5		
13.40	2.4	16.00	0.9	18.60	0.5		
13.50	2.2	16.10	0.9	18.70	0.5		

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 1 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

WORKING CURVE
FOR POND NO.PONDB12

ELEV (FT)	DISC. (CFS)	STORAGE		O2/2 (CFS)	S2/DT (CFS)	S2/DT+O2/2 (CFS)	DT= 0.10 HRS
		S2 (AC FT)	S2 (CFS-HRS)				
28.00	0.0	0.00	0.0	0.0	0.0	0.0	
29.00	2.3	0.06	0.7	1.2	7.0	8.2	
30.00	4.6	0.15	1.8	2.3	18.0	20.3	
31.00	6.1	0.25	3.0	3.1	30.0	33.1	
32.00	7.3	0.39	4.7	3.7	47.0	50.7	
33.00	8.3	0.54	6.5	4.2	65.0	69.2	
34.00	9.1	0.72	8.7	4.6	87.0	91.6	

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 2 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

POND ROUTING

HYDROGRAPH #AR100A
POND #PONDB12
STORM FREQUENCY: 100 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
11.00	0.0	0.0	0.0	0.0	28.00	0.00
11.10	0.0	0.0	0.0	0.0	28.00	0.00
11.20	0.0	0.0	0.0	0.0	28.00	0.00
11.30	0.0	0.0	0.0	0.0	28.00	0.00
11.40	0.0	0.0	0.0	0.0	28.00	0.00
11.50	0.0	0.0	0.0	0.0	28.00	0.00
11.60	0.0	0.0	0.0	0.0	28.00	0.00
11.70	0.0	0.0	0.0	0.0	28.00	0.00
11.80	0.0	0.0	0.0	0.0	28.00	0.00
11.90	0.0	0.0	0.0	0.0	28.00	0.00
12.00	0.0	0.0	0.0	0.0	28.00	0.00
12.10	0.0	0.0	0.0	0.0	28.00	0.00
12.20	0.0	0.0	0.0	0.0	28.00	0.00
12.30	5.2	2.6	2.6	0.7	28.32	0.02
12.40	11.3	8.3	10.2	2.7	29.17	0.07
12.50	13.3	12.3	19.8	4.5	29.96	0.15
12.60	12.4	12.9	28.2	5.5	30.62	0.21
12.70	10.5	11.5	34.2	6.2	31.06	0.26
12.80	8.2	9.4	37.4	6.4	31.24	0.28
12.90	6.4	7.3	38.3	6.5	31.30	0.29
13.00	4.9	5.7	37.5	6.4	31.25	0.28
13.10	3.8	4.4	35.5	6.3	31.14	0.27
13.20	3.2	3.5	32.7	6.1	30.97	0.25
13.30	2.7	3.0	29.6	5.7	30.73	0.22
13.40	2.4	2.6	26.5	5.3	30.48	0.20
13.50	2.2	2.3	23.5	5.0	30.25	0.17
13.60	2.1	2.2	20.7	4.6	30.03	0.15
13.70	2.0	2.1	18.2	4.2	29.83	0.13
13.80	1.8	1.9	15.9	3.8	29.64	0.12
13.90	1.8	1.8	13.9	3.4	29.47	0.10
14.00	1.7	1.8	12.3	3.1	29.34	0.09
14.10	1.6	1.7	10.9	2.8	29.22	0.08
14.20	1.6	1.6	9.7	2.6	29.12	0.07
14.30	1.6	1.6	8.7	2.4	29.04	0.06
14.40	1.4	1.5	7.8	2.2	28.95	0.06

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 3 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

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POND ROUTING

HYDROGRAPH #AR100A

POND #PONDB12

STORM FREQUENCY: 100 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
14.60	1.3	1.3	6.3	1.8	28.77	0.04
14.70	1.3	1.3	5.8	1.6	28.71	0.04
14.80	1.3	1.3	5.5	1.5	28.67	0.04
14.90	1.3	1.3	5.3	1.5	28.65	0.04
15.00	1.2	1.3	5.1	1.4	28.62	0.04
15.10	1.2	1.2	4.9	1.4	28.60	0.03
15.20	1.2	1.2	4.7	1.3	28.57	0.03
15.30	1.1	1.2	4.6	1.3	28.56	0.03
15.40	1.1	1.1	4.4	1.2	28.54	0.03
15.50	1.0	1.1	4.3	1.2	28.52	0.03
15.60	1.0	1.0	4.1	1.1	28.50	0.03
15.70	1.0	1.0	4.0	1.1	28.49	0.03
15.80	1.0	1.0	3.9	1.1	28.48	0.03
15.90	1.0	1.0	3.8	1.1	28.46	0.03
16.00	0.9	1.0	3.7	1.0	28.45	0.03
16.10	0.9	0.9	3.6	1.0	28.44	0.03
16.20	0.8	0.9	3.5	1.0	28.43	0.02
16.30	0.8	0.8	3.3	0.9	28.40	0.02
16.40	0.8	0.8	3.2	0.9	28.39	0.02
16.50	0.7	0.8	3.1	0.9	28.38	0.02
16.60	0.7	0.7	2.9	0.8	28.35	0.02
16.70	0.7	0.7	2.8	0.8	28.34	0.02
16.80	0.7	0.7	2.7	0.8	28.33	0.02
16.90	0.7	0.7	2.6	0.7	28.32	0.02
17.00	0.7	0.7	2.6	0.7	28.32	0.02
17.10	0.7	0.7	2.6	0.7	28.32	0.02
17.20	0.7	0.7	2.6	0.7	28.32	0.02
17.30	0.7	0.7	2.6	0.7	28.32	0.02
17.40	0.6	0.7	2.6	0.7	28.32	0.02
17.50	0.6	0.6	2.5	0.7	28.30	0.02
17.60	0.6	0.6	2.4	0.7	28.29	0.02
17.70	0.6	0.6	2.3	0.6	28.28	0.02
17.80	0.6	0.6	2.3	0.6	28.28	0.02
17.90	0.5	0.6	2.3	0.6	28.28	0.02
18.00	0.5	0.5	2.2	0.6	28.27	0.02

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE : 10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 4 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

===== POND ROUTING =====

HYDROGRAPH #AR100A
POND #PONDB12
STORM FREQUENCY: 100 YRS.

TIME (HRS)	INFLOW (CFS)	AVG INFLOW (CFS)	S2/DT+O2/2 (CFS)	OUTFLOW (CFS)	WATER ELEV (FT)	STORAGE (AC FT)
18.20	0.5	0.5	2.0	0.6	28.24	0.01
18.30	0.5	0.5	1.9	0.5	28.23	0.01
18.40	0.5	0.5	1.9	0.5	28.23	0.01
18.50	0.5	0.5	1.9	0.5	28.23	0.01
18.60	0.5	0.5	1.9	0.5	28.23	0.01
18.70	0.5	0.5	1.9	0.5	28.23	0.01
18.80	0.4	0.5	1.9	0.5	28.23	0.01
18.90	0.4	0.4	1.8	0.5	28.22	0.01
19.00	0.4	0.4	1.7	0.5	28.21	0.01
19.10	0.4	0.4	1.6	0.4	28.20	0.01
19.20	0.4	0.4	1.6	0.4	28.20	0.01
19.30	0.4	0.4	1.6	0.4	28.20	0.01
19.40	0.4	0.4	1.6	0.4	28.20	0.01
19.50	0.4	0.4	1.6	0.4	28.20	0.01
19.60	0.4	0.4	1.6	0.4	28.20	0.01
19.70	0.4	0.4	1.6	0.4	28.20	0.01
19.80	0.4	0.4	1.6	0.4	28.20	0.01
19.90	0.4	0.4	1.6	0.4	28.20	0.01
20.00	0.4	0.4	1.6	0.4	28.20	0.01
20.10	0.4	0.4	1.6	0.4	28.20	0.01
20.20	0.4	0.4	1.6	0.4	28.20	0.01
20.30	0.4	0.4	1.6	0.4	28.20	0.01
20.40	0.4	0.4	1.6	0.4	28.20	0.01
20.50	0.4	0.4	1.6	0.4	28.20	0.01
20.60	0.4	0.4	1.6	0.4	28.20	0.01
20.70	0.4	0.4	1.6	0.4	28.20	0.01
20.80	0.4	0.4	1.6	0.4	28.20	0.01
20.90	0.4	0.4	1.6	0.4	28.20	0.01
21.00	0.4	0.4	1.6	0.4	28.20	0.01

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 5 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHOD

COMPUTED BY: CTB

CHECKED BY : CTB

HYDROGRAPH #AR100A

POND #PONDB12

STORM FREQUENCY: 100 YRS.

SUMMARY OF POND ROUTING RESULTS

PEAK INFLOW : 13.3 CFS @ T = 12.50 HRS.

PEAK DISCHARGE : 6.5 CFS @ T = 12.90 HRS.

PEAK STORAGE VOLUME : 0.29 AC.FT.

PEAK STORAGE ELEVATION : 31.30

FREEBOARD : 2.70 FT.

TACONIC DESIGN

PROJECT : SINGH SITE PLAN

JOB NO.: 07119

LOCATION: NEW YORK STATE ROUTE 9W
TOWN OF NEW WINDSOR, NY

DATE :10-22-08

TYPE OF CALCULATION: STORM WATER MANAGEMENT

SHEET 6 OF

COMMENTS: TYPE III DISTRIBUTION
SOIL CONSERVATION SERVICE METHODCOMPUTED BY: CTB
=====

CHECKED BY : CTB

Hydrograph Name: AR100B

Storm Data

Drainage Area Data

Frequency :	100 Yrs.	Area:	4.6 Ac.	T.C.:	0.00 Hrs.
Rainfall :	7.80 In.	CN :	0	Ia/P:	0.00
Runoff :	0.00 In.	***** Hydrograph Status: Valid ****			

Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)	Time (Hrs)	Flow (CFS)
11.00	0.0	13.60	4.6	16.20	1.0	18.80	0.5
11.10	0.0	13.70	4.2	16.30	0.9	18.90	0.5
11.20	0.0	13.80	3.8	16.40	0.9	19.00	0.5
11.30	0.0	13.90	3.4	16.50	0.9	19.10	0.4
11.40	0.0	14.00	3.1	16.60	0.8	19.20	0.4
11.50	0.0	14.10	2.8	16.70	0.8	19.30	0.4
11.60	0.0	14.20	2.6	16.80	0.8	19.40	0.4
11.70	0.0	14.30	2.4	16.90	0.7	19.50	0.4
11.80	0.0	14.40	2.2	17.00	0.7	19.60	0.4
11.90	0.0	14.50	2.0	17.10	0.7	19.70	0.4
12.00	0.0	14.60	1.8	17.20	0.7	19.80	0.4
12.10	0.0	14.70	1.6	17.30	0.7	19.90	0.4
12.20	0.0	14.80	1.5	17.40	0.7	20.00	0.4
12.30	0.7	14.90	1.5	17.50	0.7	20.10	0.4
12.40	2.7	15.00	1.4	17.60	0.7	20.20	0.4
12.50	4.5	15.10	1.4	17.70	0.6	20.30	0.4
12.60	5.5	15.20	1.3	17.80	0.6	20.40	0.4
12.70	6.2	15.30	1.3	17.90	0.6	20.50	0.4
12.80	6.4	15.40	1.2	18.00	0.6	20.60	0.4
12.90	6.5	15.50	1.2	18.10	0.6	20.70	0.4
13.00	6.4	15.60	1.1	18.20	0.6	20.80	0.4
13.10	6.3	15.70	1.1	18.30	0.5	20.90	0.4
13.20	6.1	15.80	1.1	18.40	0.5	21.00	0.4
13.30	5.7	15.90	1.1	18.50	0.5		
13.40	5.3	16.00	1.0	18.60	0.5		
13.50	5.0	16.10	1.0	18.70	0.5		

V: POND VOLUME CALCULATION

Taconic Design

CONSULTANTS

SITE PLANNING/SUB DIVISIONS

RESIDENTIAL/COMMERCIAL DESIGN/SURVEYING

PERMIT PREPARATION/HEALTH DEPT. APPROVAL

STRUCTURAL ENGINEERING/SEPTIC DESIGN/CADD SERVICES

JOB SINGER SITE PLAN #07119-MRJ

SHEET NO. _____ OF _____

CALCULATED BY C.B. DATE 10/20/08

CHECKED BY _____ DATE _____

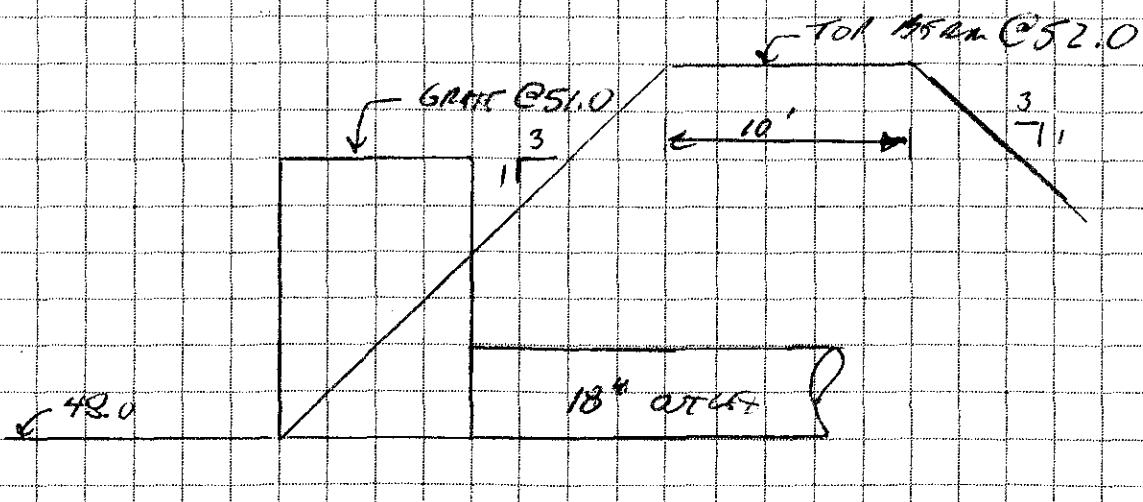
SCALE _____

Row A

ELEV	AREA (ft ²)	Avg Arcft (ft)	VOL (cu-ft)	Cum Vol (cu-ft)	W18"
48.0	3,810	3,095	0.071	0.00	0
49.0	3,380	3,668	0.084	0.07	0
50.0	3,955	4,288	0.098	0.16	0
51.0	4,620	4,953	0.114	0.25	0
52.0	5,285			0.37	15.5

$$C_{wet} + C_{dry} = 0.14 + 0.11 = 0.25$$

SET GRADE @ 51.0



Taconic Design

CONSULTANTS

SITE PLANNING/SUB DIVISIONS

RESIDENTIAL/COMMERCIAL DESIGN/SURVEYING

PERMIT PREPARATION/HEALTH DEPT. APPROVAL

STRUCTURAL ENGINEERING/SEPTIC DESIGN/CADD SERVICES

JOB SINGH SITE PLAN #07119

SHEET NO. _____ OF _____

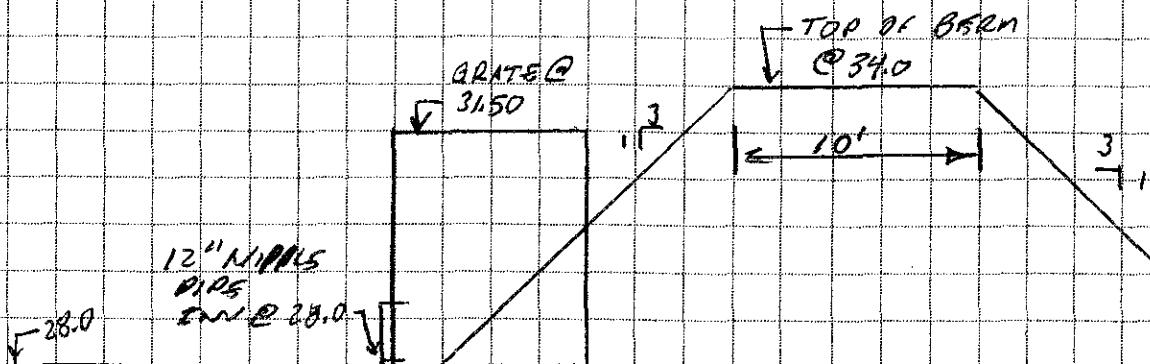
CALCULATED BY CCB

CHECKED BY _____ DATE _____

SCALE _____

Rain B

FCSV	AFFF (ft)	AVG AREA (ACR)	VOL (CU.FT)	Cum VOL (ACR)	Q12"
28.0	2,210	3,705	0.062	0.02	0.0
29.0	3,200	3,845	0.085	0.46	2.3
30.0	4,190	4,701	0.108	0.15	4.6
31.0	5,213	5,724	0.131	0.25	6.1
32.0	6,235	6,776	0.156	0.39	7.3
33.0	7,318	7,859	0.180	0.54	8.3
34.0	8,400			0.72	9.1



VI: PIPE CALCULATIONS

**Taconic Design
ENGINEERING, PLLC.**

3125 ROUTE 9W* NEW WINDSOR, NY 12553
(345)-569-8409 * fax) (845)-569-4587

PROJECT DR - STURGEON
LOCATION After Shadson
STORM FREQUENCY 25 yr

RAINFALL CURVE

REMARKS

JOB NO. 07119
DATE 10/22/08
SHEET 1 OF 1
COMPUTED BY CBB
CHECKED BY

LOCATION	A.C.R.E	SUB.	TOTAL	CA	ECA	TIME CONC.-MIN.	INLET PIPE	DES. CAP.	IN	PIPE	PIPE				INV. UPPER	INV. LOWER	TOP ELEV. UPPER	
											INLET	PIPE	TOTAL	SIZE	VEL.	SLOPE	LATE.	FALL
A-5	1-4	0.14	0.14	0.90	0.13	0.13		6.5	1.8	210	0.00	15"		6.08	65'	5.20	91.00	91.0
A-4	1-3	0.14	0.41	0.90	0.24	0.37		6.5	2.4	160	0.00	15"		4.08	91'	360	88.35	84.75
A-3	1-2	0.14	0.96	0.90	0.50	0.87		6.5	5.7	14.0	0.00	19"		1.08	60'	0.60	84.75	84.15
A-2	A-1	0.28	1.24	0.90	0.25	1.12		6.5	7.3	38.0	0.00	19"		0.08				87.00
A-3-2	A-2-1	0.14	0.14	0.90	0.13	0.13		6.5	0.8	21.0	0.00	15"		8.0	65'	5.20	91.20	91.00
A-3-1	A-3	0.14	0.41	0.90	0.24	0.37		6.5	2.4	15.0	0.00	15"		4.08	90'	360	88.75	84.75
A-4-1	A-4	0.14	0.14	0.90	0.13	0.13		6.5	0.8	7.5	0.00	15"		1.08	45'	0.45	91.45	91.00
A-3-3	A-3-1	0.14	0.14	0.90	0.13	0.13		6.5	0.8	2.5	0.00	15"		1.08	45'	0.45	91.45	91.00

VII: POND CONSTRUCTION STANDARD SPECIFICATIONS

POND CONSTRUCTION STANDARDS SPECIFICATIONS

General

All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry storm water management ponds, a minimum of a 25-foot radius around the outlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, and stones greater than 6, frozen or other objectionable materials. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer. Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8-inch thick (before compaction) layers, which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out. When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with moisture content within 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10-year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed eight inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 18 inches or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

Pipe Conduits

All pipes shall be circular in cross section, unless otherwise noted.

Plastic Pipe - The following criteria shall apply for plastic pipe:

1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4" through 10" pipe shall meet the requirements of AASHTO M252 Type S, and 12" through 24" pipe shall meet the requirements of AASHTO M294 Type S.

2. Joints and connections to anti-seep collars shall be completely watertight.
3. Bedding -The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
4. Backfilling shall conform to Structure Backfill requirements.
5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Rock Riprap

Rock riprap shall meet the requirements of the New York State Department of Transportation. Geotextile shall be placed under all riprap and shall meet the requirements of the New York State Department of Transportation.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with local Natural Resources Conservation Service Standards and Specifications.

Erosion and Sediment Control

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. Federal, State and local laws concerning pollution abatement will be followed. Project plans detail erosion and sediment control measures, which shall be strictly adhered to.

Operation and Maintenance

An operation and maintenance plan in accordance with Local or State Regulations will be prepared for all ponds. As a minimum, a dam inspection checklist shall be included as part of the operation and maintenance plan and performed at least annually. Written records of maintenance and major repairs need to be retained in a file.

Supplemental Storm Water Pond Specifications

- 1) A 4-inch layer of topsoil shall be placed on all disturbed areas of the dam embankment. Seeding, liming, fertilizing, mulching, etc. shall be in accordance with NRCS Soil Standards and Specifications or New York State Standards and Specifications for Soil Erosion and Sediment Control. The purpose of the topsoil is to establish a good growth of grass, which is not always possible with some of the materials that may be placed for the embankment fill.
- 2) Filter fabric placed beneath the riprap shall meet state or local department of transportation requirements for a Class C. filter fabric. Some acceptable filter fabrics that meet the Class C. criteria include:

Mirafi 180-N

Amoco 4552

Webtec N07

Geolon N70

Carthage FX-70S

- 3) Fill placement shall not exceed a maximum of 8-inch lift thickness. Each lift shall be continuous for the entire length of the embankment.
- 4) The embankment fill shall not be placed higher than the centerline of the principle spillway until after the principle spillway has been installed.
- 5) The side slopes of a cut to repair a dam, install a principle spillway for an excavated pond, or other repair work, shall be stepped and on an average slope of 2:1 or flatter.

Owners Responsibility:

This SWPPP and associated plans shall be kept on site at all times during construction and a copy shall be provided to all contractors and sub-contractors. It is the owner's responsibility to comply with conditions of this plan.

Owners Certification:

"I certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP for the construction site identified in such SWPPP as a condition of authorization to discharge storm water. I also understand that the operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for storm water discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards."

Signature

Name

Title